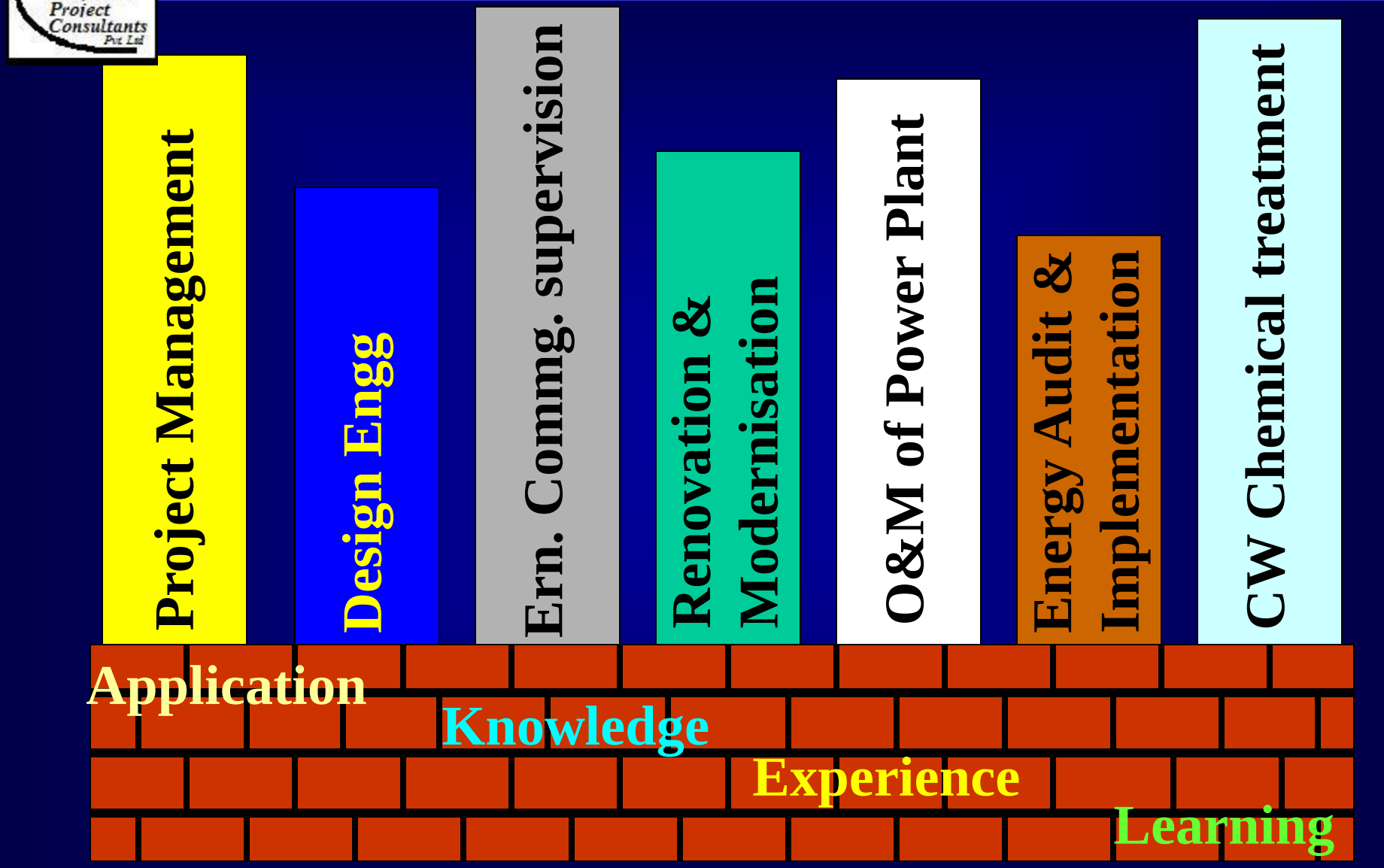
Excel Project Consultants Pvt. Ltd.

A group of Ex BHEL engineers for Energy & Power projects

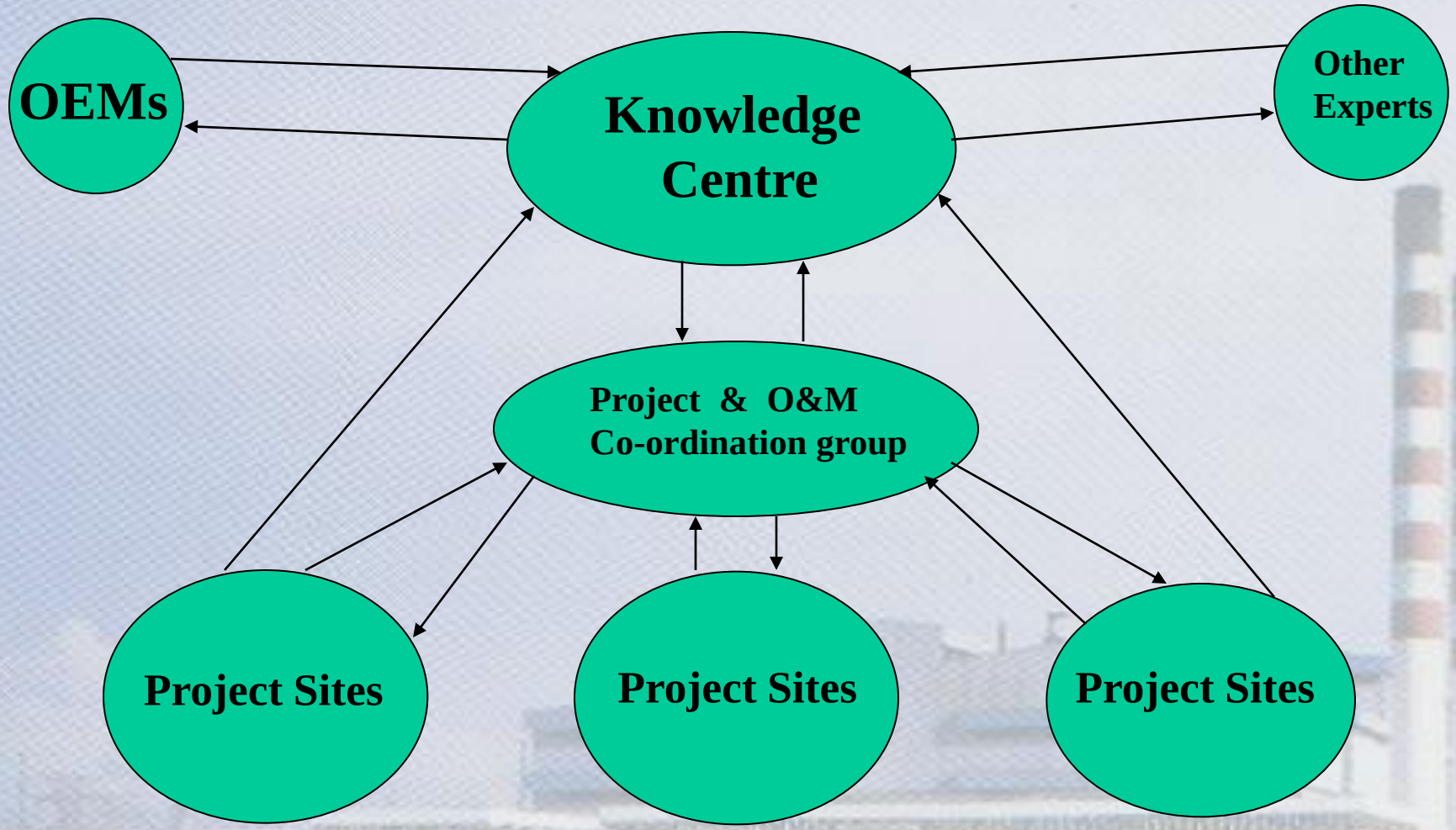
Who are we?

EPCPL is a 6 years old company (date of incorporation 13th Apr, 2007) with Ex BHEL Power Sector Experts who are having wide range of on site project experience. The expert knowledge bank is maintained at Kolkata and utilized at projects to provide knowledge based services.

Our Core strength



Methodology



OUR COMPETITIVENESS IN THE MARKET

- Customer satisfaction – Many of our jobs are repeat order/renewals in nature. This includes new jobs from same customer.

- Integrity and commitment - None of our contracts left unfinished.

- System improvement and troubleshooting capability – System improvement in the areas of **Specific Power Consumption**, **Heat Rate, Aux Power Consumption, Plant Availability** and reduction of **Trips** are different folds of our business area.

OUR COMPETITIVENESS IN THE MARKET (CONTD……)

- Our company core group is constituted with highly experienced ex-BHEL technical persons who are also in company ownership and so, the presence of technical support throughout the contract period is guaranteed.

- Due to this sustained knowledge base availability we are entrusted with many big jobs even without having any similar credentials with the current company EPCPL.

Core Group

Pradip Sengupta

A Mechanical engineer with 19 years experience in BHEL and 6 years in EPCPL in the area of Steam Turbine & TG cycle commissioning, Performance Guarantee & Evaluation tests/audit/ improvement, Aux. power measurement & audit/ Optimisation/Energy management of Power plants, Project management of Large turnkey projects, Engineering & Engineering co-ordination, Procurement & subcontracting of BOP (Balance of Plant) for turnkey projects, Erection & Planning of large Turnkey project execution at sites.

Asish Mandal

A Mechanical engineer with 20 years experience in BHEL and 5 years in EPCPL in the area of Boiler & Auxiliaries commissioning Performance Guarantee & Evaluation tests/audit/ improvement, Aux. power measurement & audit/ Optimisation/Energy management of Power plants, Project commissioning of Large turnkey projects, Engineering & Engineering co-ordination, Procurement & subcontracting of BOP (Balance of Plant) for turnkey projects, Erection & Planning of large Turnkey project execution at sites.

Core Group

Subir Ghosh

A Mechanical engineer with 20 years experience in ABL (Babcock, UK), THYSSEN KRUPP (LLB, Germany), THERMAX, BABCOCK & WILCOX (B & W, USA), BHEL and 5 years in EPCPL in the area of Boiler & Auxiliaries commissioning, Project commissioning of Large turnkey projects, Engineering & Engineering co-ordination, Procurement & subcontracting of BOP (Balance of Plant) for turnkey projects, Residual life assessment of Boiler at different sites. Desalination, & Demineralization plant commissioning in Middle East with FISIA ITALIAMPIANTI (ITALY).

Shantanu Dutta

An Electrical engineer with 15 years experience as entrepreneur in the area of Pollution Control equipment, Power plant electrical, Boiler & Auxiliaries, erection & commissioning, Project execution of Large turnkey projects, Engineering & Engineering co-ordination, Procurement & subcontracting for turnkey projects and industrial projects.

SERVICE MODULES

ERECTION & COMMISSIONING :

Erection & commissioning supervision services of Mechanical, Electrical, Instrumentation areas of Power & Process Plants including trouble shooting related to BOP, Turbine, Boiler & Piping up to System Stabilization and PG test with a very high degree of knowledge base, experience & Integrity.

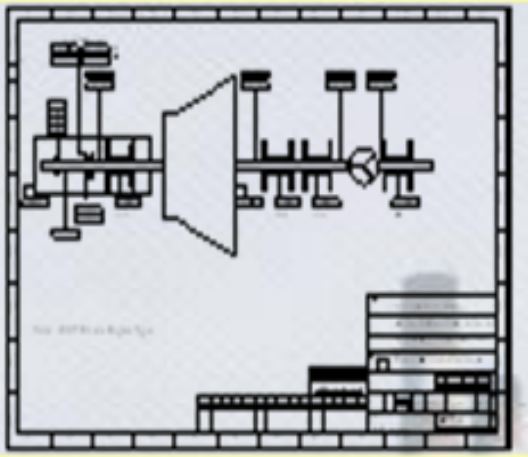
Major Commissioning Projects Executed

BHEL	Commissioning of 45 MW unit at Tata Power Haldia on lumpsum basis
DB Power Limited	Commissioning of 2x600 MW TPP at Champa Chattisgarh
Lanco Infratech Limited	Commissioning of TG, Blr & BTG electricals of U# 1 & 2 at at 2x 300 MW TPP at Amarkantak (Lumpsum basis)
Lanco Infratech Limited	Commissioning of TG, Blr of U# 1 & 2 at at 2x 507.5 MW TPP at Udupi
Lanco Infratech Limited	Commissioning of TG, Blr of U# 1 & 2 at at 2x 600 MW TPP at Anpara
Jindal Steel & Power Limited.	Commissioning of 135 MW TPP at JSPL Raigarh
Mcnally Bharat Eng. Co. Ltd.	Mechanical Commissioning services of Balance of Plant of 1x271 MW TPP
Ansaldo India Limited	Commissioning 1no 77 MW PF Boilers in Gumidipundy
Thermax Limited	Commissioning Of 1x110 TPH PF fired Boiler KSG STUTTGARD make at Kurnool, Andhra Pradesh (Under Execution).

SERVICE MODULE

DESIGN ENGINEERING :

Design engineering of Power Plants as a whole or part including review & detailing of different systems & subsystems in the areas of Civil, Mechanical, Electrical and instrumentation. Design modules are also made for system improvement packages.



Major Design Engineering Job Executed

TATA Power	Design Audit of 3x33 MW CPP at Bharat Oman Refinery Limited Bina, Madhyapradesh
Techno Electric	Design engineering of 30 MW TG plant at TCL Mithapur, Gujrat
Techno Electric	Steam piping design engineering for RIL at Hissar, Haryana
Lanco Infratech Limited	Steam piping for 127 MW STG of 371 MW TPP 1st phase at Kondapally, Andhrapradesh
Lanco Infratech Limited	Steam piping for 2X127 MW STG of 2X371 MW TPP 2nd phase at Kondapally, Andhrapradeh
WPIL Limited	3.5 Km X country water piping
Sova Ispat Limited	Review engineering & consultancy for 15 MW TPP at Bankura, West Bengal
TATA Chemicals	Steam system Design of MUW @ AR 900 TPD Salt Plant 1st Phase at Mithapur, Gujrat
TATA Chemicals Mithapur	Steam system Design of MUW @ AR 900 TPD Salt Plant 2nd Phase under final stage of negotiation at Mithapur, Gujrat

SERVICE MODULE

CW TREATMENT :

CW chemical treatment with guaranteed performance parameters for Condensers, Heat exchangers to achieve maximum efficiency & no outage for condenser / heat exchanger descaling, corrosion and bio fouling in association with NALCO.

Major CW water treatment Work

WBPDCL. (Sagardighi)	Chemical supply & conditioning of CW system at Sagardidhi TPP (2x300 MW)
WBPDCL. (Kolaghat)	Chemical supply & conditioning of CW system, U#1,2,3 of 3x 210 MW at Kolaghat TPP
WBPDCL. (Santaldih)	Chemical supply & monitoring of CW system, 2x250 MW Santaldih TPP
Cresent Power Limited (CPL)	Chemical supply & conditioning of CW system, at CPL TPP (1x40 MW)

SERVICE MODULE

RENOVATION & MODERNISATION :

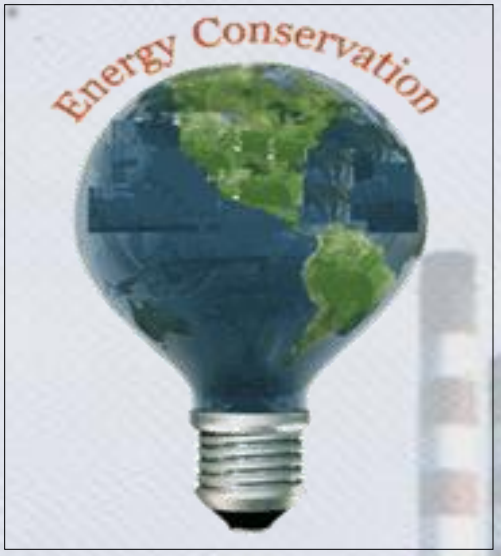
Engineering, Procurement & Construction work for different types of Renovation & modernization of Power & Process plants are undertaken with predetermined commitment of performance. Trouble shooting and system improvement packages are also being done as R&M of Power plants.

Overhauling, R&M, Procurement Job Executed

ACC Limited	Overhauling & Generator rotor replacement of 15 MW TG at Chaibasa.
ACC Limited	Implementation of Intelligent Load Shedding Scheme with Grid Synchronization including engineering, procurement, E&C and demonstration.
TCL Mithapur	Conversion of Hydraulic Governing into Electro hydraulic governing for 30 MW TG
Trouble Shooting	PCBL, SEPSPL, Shyam steel, Electrosteel, LITL, Bengal Energy-Bangladesh etc.

SERVICE MODULE

ENERGY CONSERVATION PROGRAME :



We are energy systems practitioners and our specialized participation of providing value added services in energy systems audit and implementation of audit recommendation results in productivity improvement adding to the firm's bottom line thereby increasing their financial profitability, resource / wastages minimization and ensuring reduction of environment pollution thus making this earth a safe place for the mankind.

Energy Audit & Implementation Job Executed

Crescent Power Limited (CPL)	Energy audit & technical recommendation for Improvements.
Crescent Power Limited (CPL)	Implementation engineering of audit recommendations for guaranteed reduction on existing Aux Power consumption up to a level of 8% (min).

METHODOLOGY FOR ENERGY AUDIT & IMPLEMENTATION PROJECT

ENERGY CONSERVATION & AUDIT

- Collection of design data, drawings & operating schedule through a prescribed format
- Measurement of operating parameters through calibrated instruments
- Analysis of measured data
- Assessment of energy saving
- Submission of report with financial modeling

IMPLEMENTATION THROUGH ENGINEERING & CONSULTATION

- Preparation of implementation plan based on the audit report
- Designing of the system to be implemented & release of specification for procurement
- Providing technical support throughout the implementation phase & there after (optional)
- Technical supervision as required
- Assured monetary saving after implementation

IMPLEMENTATION THROUGH ESCO ROUTE

- Preparation of implementation plan based on the audit report
- Designing of the system to be implemented
- Procurement of equipment & systems
- Installation of equipment through experienced & skilled professionals
- Providing technical support throughout the implementation phase & there after (optional)
- Assured monetary saving after implementation
- Sharing of profit after implementation

FOCUS AREA FOR ENERGY SAVING

ELECTRICAL ENERGY CONSERVATION

- Reduction in distribution loss & cost through power factor improvement
- Reduction in Contract Demand.
- Improve voltage level at motor terminal and thus efficient operating condition.
- Reduction in maintenance cost by improving equipment lifetime.
- Reduction in power consumption by equipment by improving output & minimizing energy wastage.
- Reduction in production cost by optimization of process running parameters for better output.

THERMAL ENERGY CONSERVATION

- Reduction in heat loss by identifying the steam leakage point and sealing it.
- Improving the heat rate of the Power Plant/CPP.
- Improvement in running hours by improving the Plant Availability Factor.
- Reduction in steam consumption by optimum use of condensate recovery.
- Reduction in surface heat loss by proper insulation & refractories.
- Optimization of boiler & system equipment parameters for reduction in fuel consumption.
- Investigation of scope for co-generation utilizing the unused heat.
- Investigation of scope for waste heat recovery.

POWER QUALITY & HARMONICS AUDIT

- Identification of THD-V & THD-I in the electrical system.
- Designing of harmonic filter for mitigation

ELECTRICAL SAFETY AUDIT

- Testing of relays
- Testing of overload tripping mechanism
- Testing of safety devices
- Insulation survey
- Earth resistance measurement

INDUSTRY BENEFIT

THROUGH:

- Guaranteed monetary saving without taking individual risk
- Plant performance, productivity improvement
- Energy / Product cost reduction thereby organization's profitability enhancement
- Around 5 to 20% of energy saving is possible
- Plant / equipment life enhancement
- Adherence to Social commitment by reducing environmental pollution
- Saving precious and depleteable conventional energy resources
- Sustainable business mission

SERVICE MODULE

OPERATION & MAINTENANCE:

Operation & Maintenance of a Power & Process plants as a whole (Without involvement of Customer Engineer/representative) at lesser cost than the existing operating cost of customer. Improve reliability of operation by reliability study & implementation, so improved PLF. Improve efficiency/Heat rate of a Plant using various improvement packages.

Major Operation & Maintenance Job Executed

ISGEC John Thompson	O&M supervision of 1x25 MW unit at TPC Tanzania (One year)
Crescent Power Limited (CPL)	O&M of 1x40 MW TPP at CPL Asansol (4th year continued).
Alstom India Ltd.	O&M of a 2x40 MW power plant at BPSCL, Bokaro in association with Alstom Power (under negotiation).

PROGRAMME METHODOLOGY FOR O&M PROJECT

Execution of an O&M contract is not merely managing the day to day operation and maintenance activities. It is an integration of the following:

OPERATIONS

- Conduct of Operations
- Optimization of plant parameters
- Optimization of consumables.
- Equipment Status Control

MAINTENANCE

- Work Control System
- Conduct of Maintenance
- Preventive Maintenance & Overhauling.
- Breakdown maintenance.
- Maintenance Procedures and Documentation

ENGINEERING SUPPORT

- Engineering Support to Organization and Administration
- Modifications, Improvements & Energy Conservation.
- Equipment / System Performance parameter Monitoring
- Engineering Support Procedures and Documentation

TRAINING

- General Employee Training
- Operator Training
- Maintenance Training
- Training on performance parameters

ADMINISTRATION

- Control of O&M parameters
- Management Objectives
- Management of consumables and spares
- Planning, forecasting & program administration
- Industrial Safety & Quality

PROGRAMME IMPLEMENTATION & WORK BREAK DOWN STRUCTURE:-

- BTG and BOP O&M
- Condition monitoring & Technical services (including safety & quality)
- Engineering, Innovations, Improvements & Energy conservation
- Planning, Forecasting & Program administration.
- MM & procurement
- Administration (HR, Accounts)
- Contract operations
    - AHP O&M
    - CHP O&M
    - Coal unloading up to ground hopper
    - Maintenance (Mechanical, Electrical & Instrumentation)
    - WTP
    - Housekeeping, security & unskilled workers
    - Equipment AMCs

QUALITY MEASUREMENT OF IMPLEMENTED O&M PROGRAM

- Annual Station Heat Rate (ASHR)
- Equivalent Plant Load Factor (EPLF)
- Dependable Capacity Availability (Unit wise)
- Auxiliary Power Consumption (APC)
- Secondary Fuel Consumption (SFC) – LDO consumption
- Number of Tripping (Unit wise)
- Safety – Number of accidents (Minor and Major)
- Consumables – Usage of excess consumables than budgeted
- Spares – Usage of excess consumables than budgeted
- Chemicals & Lubricants – Usage of excess chemicals & lubricants than budgeted
- Compliance to Maintenance Schedule
- Compliance to Statutory Requirements

CHALLENGES AHEAD

BOTH OF US

Thank You