

**LIST OF THERMAL POWER PROJECTS UNDERTAKEN BY  
MM PAKISTAN (PVT) LTD.**

Project	Client	Description	Fee Million	Value Million	Completion
213 MW Reciprocating Engines based Combined cycle power project at Narowal , Punjab	HUBCO	<p>HUBCO intends to extend its power Generation facility by installing a new 213 MW RFO power project at Narowal , Punjab. The EPC contract between HUBCO and MAN Germany has been concluded 29th April , 2008. This project will add 213 MW to PEPCO System to meet the power demand of GEPCO, LESCO and FESCO Distribution Companies which are now a days in severe grip of power crisis. HUBCO (The Owner) has awarded the design, engineering and procurement, contract to MANN Germany, responsible for supply and delivery of the Diesel Engines RFO Based Combined cycle power project with all BOP, while the construction agreement for main civil works , erection, start up , commissioning and testing of the project is awarded to M/S Man Diesel Pakistan (pvt), 16 KM Raiwind Road Lahore on 18th June ,2008..</p> <p>The set up of this project consists of the following main components.</p> <ul style="list-style-type: none"> <li>▪ 11 Diesel Engines Generators.sets</li> <li>▪ 11 HRSGs and One Aux: Boiler.</li> <li>▪ One Steam Turbine.</li> <li>▪ RFO system including storage Tanks and Decanting arrangements</li> <li>▪ Cooling Water System.</li> <li>▪ Chemical Water Treatment Plant</li> <li>▪ Compressed Air System</li> <li>▪ 132 KV Substation</li> <li>▪ MV/LV Power systems.</li> <li>▪ DC system and DC batteries.</li> <li>▪ DCS/ PLC Control systems and Field Instruments.</li> <li>▪ Balance of Plant.</li> </ul>	Rs. 47.5 (MMP)	Euro 0.8 m (Mott Pettit, Dublin UK)	2010
Advisory Project Management Services for DHA Power and Desalination Plant Karachi	DHA Cogen Ltd. (DCL)	<p>DHA have planned to install a combined power and desalination plant (CPDP) in one of its constitute residential / commercial sector Phase VIII. An independent company DHA Cogen Ltd. has been established.</p> <p>DHA's estimated current requirement of potable water is 7.5 mgd. KWSB sanctioned 4.5 mgd. Alternative source for 3.0 mgd is (CPDP). For the purpose a power plant of 94 MW is established to run Desalination Plant. Surplus power after making full requirement will be sold to KESC.</p> <p>Main components are:</p> <ol style="list-style-type: none"> <li>1. One Gas Turbine (GT)</li> <li>2. One dual capacity heat recovery steam generator (HRSG)</li> <li>3. One Steam Turbine (ST)</li> <li>4. Two Desalination Plants</li> </ol> <ul style="list-style-type: none"> <li>▪ SIEMENS AG Power Generation Germany supply power plant of 94</li> </ul>			2007

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		<p>MW capacity.</p> <ul style="list-style-type: none"> <li>▪ Alfa Laval of Germany supply two desalination plants of total capacity of 3 mgd</li> <li>▪ Lincas (Germany) supply gas supply system.</li> <li>▪ Erection and commissioning Siemens Pakistan</li> </ul>			
KESC's Korangi Thermal Power Station – Extension Project	Karachi Electric Supply Corporation	<p>Karachi City's electric power demand is around 2,300 MW. Karachi Electric Supply Corporation (KESC) has its own power generation and acquires the electric supply from other sources. It is still 300 MW to 500 MW short of requirement. To overcome this shortfall, KESC has planned to increase the power generation capability of existing Korangi Thermal Power Station (KTPS) by installing additional generators KESC, now a duly privatized utility, intends to first extend the present Simple Cycle Gas Turbine (SCGT) generation capacity and subsequently establish a combined cycle power plant at KTPS.</p> <p>KESC has engaged MM Pakistan (Pvt.) Limited (MMP) in Owner's Engineer role to provide consultancy for Advisory Project Management Services in this Project. International expert staffing will be arranged. (2007)</p>			2007
Tapal Energy 160 MW Diesel Power Plant	Tapal Energy	<p>Tapal Energy (Pvt) Limited (TEL) is one of the first generation of Independent Power Plants (IPP) set up in Pakistan under the 1994 Power Policy. It installed a 126 MW Power Plant which was commissioned in June, 1997. The plant is operating successfully since then.</p> <p>TEL is now in the process of preparing a proposal for 160 MW power plant to operate on Residual Fuel Oil (RFO) or Combined Cycle Power Generation technology. On TEL's invitation, EPC contractors submitted the bids for this plant.</p> <p>The Client approached MM Pakistan (Pvt.) Limited to provide consultancy services alongwith Mott MacDonald Group of United Kingdom, as Owner's Engineer.</p> <p>The first phase of review and evaluation of EPC contractors, specifications and scope of supply as well as the recommendations Owner's Engineer has been completed.</p>			2006
135 MW Japan Diesel Power Station near Raiwind	National Bank of Pakistan	<p>Detailed inspection of the power station was done as Lender's Independent Engineers. Its report covered:</p> <ul style="list-style-type: none"> <li>▪ Details of any events of default, potential event of default or Forced Majeure.</li> <li>▪ Details of any material dispute</li> <li>▪ Details of forecasted / projected</li> </ul>		0.28	2003

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		<p>amount against actual expenditure on operating the plant.</p> <ul style="list-style-type: none"> <li>▪ Comparison between revenue forecast and actual received by the company along with variance, if any.</li> <li>▪ Details of maintenance and costs, fuel purchases / consumed etc.</li> <li>▪ Net operating output, no. of cold starts, hot starts and other details as required under the agreement.</li> <li>▪ Environmental compliance &amp; defaults, if any.</li> </ul>			
117 MW SEPCOL Diesel Power Station – Lender’s Independent Engineer	National Bank of Pakistan	<p>The Lender of funds, National Bank of Pakistan appointed MM Pakistan in association with Mott MacDonald Ltd of UK, as Independent Engineer to examine and review the operation and maintenance of SEPCOL’s Raiwind Diesel Power Station, every six months. The independent Engineer reviews SEPCOL’s quarterly operating reports, carried out site inspection, holds discussions with the Client and operation staff and submitted a detailed report to National Bank of Pakistan, covering Operation and Maintenance activities, Staffing, Financial Analysis, Health, Safety and Environmental aspects etc.</p>	Rs. 0.46 + £3,000		2003
117 MW Diesel Power Plant Monitoring as Lender’s Engineer for SEPCOL	National Development Finance Corporation (NDFC), Karachi	<p>Consultants physically visited the plant and reported on:</p> <ul style="list-style-type: none"> <li>▪ Details of any events of default, potential event of default or Forced Majeure.</li> <li>▪ Details of any material dispute</li> <li>▪ Details of forecasted / projected amount against actual expenditure on operating the plant.</li> <li>▪ Comparison between revenue forecast and actual received by the company along with variance, if any.</li> <li>▪ Details of maintenance and costs, fuel purchases / consumed etc.</li> <li>▪ Net operating output, no. of cold starts, hot starts and other details as required under the agreement.</li> <li>▪ Environmental compliance &amp; defaults, if any.</li> </ul> <p>Review of environmental monitoring plan.</p>	Rs. 2.0 + £4500		2001