

LIST OF TABLES

Table 2-1: Indian Power sector business framework (Wholesale & Retail) & IPP investment	17
Table 2-2: Coal Supply Framework	34
Table 2-3: Reform in power sector in India vis-à-vis international power sector reform	48
Table 2-4: Investment appraisal and investment decision under uncertainty	53
Table 2-5: Important Events - Indian Electricity & Coal Sector.....	64
Table 2-6: Investment Appraisal criteria.....	70
Table 2-7: Assessment of Basic Evaluation Techniques.....	73
Table 2-8: Policy related literature on Different Sources of Uncertainty	79
Table 3-1: Methodology / Design	85
Table 3-2: Areas covered by the Interviews.....	95
Table 3-3: Category-wise Sample Interview Questions.....	96
Table 4-1: All India Demand Supply Position - Electricity	104
Table 4-2: Per Capita Consumption of Electricity	104
Table 4-3: Major Central level policies impacting development of IPP/ MPPs in India.....	107
Table 4-4 : Coal : Domestic & Imported.....	108
Table 4-5: Yearwise FSA provisions	111
Table 4-6: Price movement in Power Exchanges.....	113
Table 4-7:UDAY status.....	117
Table 5-1: Interview Chart I.-Investment criteria used during investment ...	120
Table 5-2: Interview Chart II - Major uncertainties now being faced.....	122
Table 5-3: Interview Chart III. Could application of ROT have helped	124
Table 5-4 Plan period wise capacity addition	127
Table 5-5 Capacity without PPA/ Coal	130
Table 5-6: Successful Bidders – Auction of Mines for Power Sector.....	131
Table 5-7 Project without coal source	133
Table 5-8: Power Survey Projections vis-à-vis Actuals.....	134
Table 6-1: Interview Chart IV - Impact of Fuel Policy change.....	143
Table 6-2: Interview Chart V. Reasons for introducing policy change.....	146
Table 6-3: Interview Chart VI Parameters of Policy Change as obtained from selected Developer	149
Table 6-4: Comparative Cost of Heat for various types of Coal.....	151
Table 6-5: Chart on Fuel Cost of generation sent out	151
Table 6-6: Additional Cost of Generation (Sent Out)- Impact of Fuel Policy Change	151
Table 6-7: Interview Chart VII. Impact of Barriers	153
Table 6-8: Short Term Open Access Charges for 11 KV Industrial Consumer	159
Table 6-9: Long Term Open Access Charges for 11 KV Industrial Consumer	160
Table 6-10: Impact of Barriers on viability.....	161
Table 6-11: Significance of open access charges – Sensitivity Analysis.....	161
Table 6-12: Interview Chart VIII: Project Details.....	162

Table 6-13: Critical Assumptions.....	164
Table 6-14: Scenario 1: 30% Capacity Utilisation [Plant Load Factor (PLF)].....	165
Table 6-15: Scenario 2: 60% Capacity Utilisation [Plant Load Factor (PLF)].....	166
Table 6-16: Scenario 3: 80% Capacity Utilisation [Plant Load Factor (PLF)].....	167
Table 6-17: Scenario 4: Mothballing of Plant (No Generation).....	168
Table 6-18: Input	169
Table 6-19: Computation.....	173
Table 6-20: Output	176
Table 6-21: Summary of Findings.....	177
Table 6-22: Break Even price.....	177
Table 6-23: Linkage coal significance	178
Table 6-24: Outcome – Linkage coal significance.....	178
Table 6-25: Assumptions.....	179
Table 6-26 Net Cash Flow at various Capacity Utilisation.....	180
Table 6-27: Scenario Analysis	181
Table 6-28 : Net Cash Flow at various cost mix	181
Table 6-29: Sensitivity of Open Access charges.....	181
Table 6-30: Interview Chart IX - Flexibility	182
Table 6-31: Capex – Tariff Linkage - At 60% CUF	183
Table 6-32: Comparative Heat Value of Fuels – Merit Order	183
Table 7-1: Interview Chart X- Coal availability issues.....	187
Table 7-2: Interview Chart XI - Contracting issues (Power Purchase)...	190
Table 7-3: Interview Chart XII - Access to Retail market / Retail market development.....	192
Table 7-4: Interview Chart XIII - Financing and Policy issues.....	197
Table 8-1: Issue-wise recommendations Summary.....	203
Table 8-2: Stakeholderwise Intervention / Action Requirement.....	213