

評価項目	調査大項目	調査小項目	判断基準・方法	必要な情報・データ	情報源	データ収集・調査方法	
実績	投入実績(これは、あくまで実績のみ記載)	専門家(長期、短期)と調査団派遣実績	専門家の投入内容	専門家派遣実績、インセンシブレポート、業務完了報告書、調査団派遣記録、関連調査団報告書	専門家派遣実績、インセンシブレポート、業務完了報告書、調査団派遣記録、関連調査団報告書	専門家派遣実績、インセンシブレポート、業務完了報告書、調査団派遣記録、関連調査団報告書	
		機材供与	投入機材の種類や数量、さらに目的	投入機材の種類や数量、さらに目的	資材供与実績、専門家、調査団の調査(運営管理状況)	資材供与実績、専門家、調査団の調査(運営管理状況)	資材供与実績、専門家、調査団の調査(運営管理状況)
		研修員受入(本邦研修の奨励も確認)	研修員受入(本邦研修の奨励も確認)	研修員受入(本邦研修の奨励も確認)	研修員受入人数と期間、研修内容	研修員受入人数と期間、研修内容	研修員受入人数と期間、研修内容
		現地活動費	現地活動費	現地活動費	現地活動費投入実績、専門家の観察	現地活動費投入実績、専門家の観察	現地活動費投入実績、専門家の観察
		プロジェクトの管理、支援体制	プロジェクトの管理、支援体制	プロジェクトの管理、支援体制	合同会議(JCC)開催記録、インセンシブレポート、専門家の観察	合同会議(JCC)開催記録、インセンシブレポート、専門家の観察	合同会議(JCC)開催記録、インセンシブレポート、専門家の観察
		トルコ側投入	トルコ側投入	トルコ側投入	C/Pの配置状況、トルコ側予算配分状況、専門家の観察	C/Pの配置状況、トルコ側予算配分状況、専門家の観察	C/Pの配置状況、トルコ側予算配分状況、専門家の観察
		投入は計画通りだったか	投入は計画通りだったか	投入は計画通りだったか	PDM、PO、専門家の観察	PDM、PO、専門家の観察	PDM、PO、専門家の観察
		活動は計画通りに行われたか	活動は計画通りに行われたか	活動は計画通りに行われたか	プロジェクトの活動状況は計画通りか?	プロジェクトの活動状況は計画通りか?	プロジェクトの活動状況は計画通りか?
		モニタリングの仕組みは適切であったか	モニタリングの仕組みは適切であったか	モニタリングの仕組みは適切であったか	プロジェクト内の取組み状況、努力は? プロジェクト進捗の報告はどうか? 活動の管理やその後のフォローアップは適切に行われたか? (とりわけ日本人不在の間の進捗、リハビリ計画の作成やマニュアル作成は進められたか?)	プロジェクト内の取組み状況、努力は? プロジェクト進捗の報告はどうか? 活動の管理やその後のフォローアップは適切に行われたか? (とりわけ日本人不在の間の進捗、リハビリ計画の作成やマニュアル作成は進められたか?)	プロジェクト内の取組み状況、努力は? プロジェクト進捗の報告はどうか? 活動の管理やその後のフォローアップは適切に行われたか? (とりわけ日本人不在の間の進捗、リハビリ計画の作成やマニュアル作成は進められたか?)
		専門家とC/Pとの関係	コミュニケーションの状況は良好か、共同して問題に対処したか	コミュニケーションの状況は良好か、共同して問題に対処したか	定期的な意見交換、会議の開催? 意見交換や情報共有が関係者に十分になされたか?	定期的な意見交換、会議の開催、日常業務におけるコミュニケーションの方法と実績	定期的な意見交換、会議の開催、日常業務におけるコミュニケーションの方法と実績
妥当性	C/Pの責務と役割	先方実施機関に自動努力が促されたか(全体計画・実施・モニタリング機能)	先方実施機関に自動努力が促されたか(全体計画・実施・モニタリング機能)	本邦EUIAS及び各関係者の本プロジェクトの理解度や推進意は適切だったか?	本邦EUIAS及び各関係者の本プロジェクトの理解度や推進意は適切だったか?	本邦EUIAS及び各関係者の本プロジェクトの理解度や推進意は適切だったか?	
		相手の実施機関のオーナーシップ	相手の実施機関のオーナーシップ	トルコ側の負担状況	トルコ側の負担状況	トルコ側の負担状況	
		C/Pの配置は適正か	C/Pの配置は適正か	専門家はC/Pの配置に満足しているか? C/Pの配置は関係者にとって適切であったか?	専門家はC/Pの配置に満足しているか? C/Pの配置は関係者にとって適切であったか?	専門家はC/Pの配置に満足しているか? C/Pの配置は関係者にとって適切であったか?	
		プロジェクト期間中の試行錯誤や課題解決事項	プロジェクト期間中の試行錯誤や課題解決事項	新たな試み、PDMの修正やプロジェクトの実施体制の変更、プロジェクトの広報啓蒙の有無	新たな試み、PDMの修正やプロジェクトの実施体制の変更、プロジェクトの広報啓蒙の有無	新たな試み、PDMの修正やプロジェクトの実施体制の変更、プロジェクトの広報啓蒙の有無	
		成果は達成される見込みがあるか	成果は達成される見込みがあるか	各情報の確認(成果レベル1-6までの達成状況)	各情報の確認(成果レベル1-6までの達成状況)	各情報の確認(成果レベル1-6までの達成状況)	
		プロジェクトも上位目標も達成しているか	プロジェクトも上位目標も達成しているか	上位目標は、当該国が自国が持つ方向性(例えば、省エネルギー、環境改善)と一致しているか? (当該国のコミットメント)	上位目標は、当該国が自国が持つ方向性(例えば、省エネルギー、環境改善)と一致しているか? (当該国のコミットメント)	上位目標は、当該国が自国が持つ方向性(例えば、省エネルギー、環境改善)と一致しているか? (当該国のコミットメント)	
		対象者(受益者)の選定は適切か(ターゲットグループ=EUIAS並びに発電所スタッフ、対象地単一グループ(トルコ側)の選定は適切か)	対象者(受益者)の選定は適切か(ターゲットグループ=EUIAS並びに発電所スタッフ、対象地単一グループ(トルコ側)の選定は適切か)	サイト選定(トルコ側)は適切であったか? 協力方法や支援アプローチには妥協があったか? またはサイト選定の機軸状況	サイト選定(トルコ側)は適切であったか? 協力方法や支援アプローチには妥協があったか? またはサイト選定の機軸状況	サイト選定(トルコ側)は適切であったか? 協力方法や支援アプローチには妥協があったか? またはサイト選定の機軸状況	
		緊急事態の選定(リスク)に及び活動とその技術移転方法、取り組み支援の方法(アプローチ)は適切であったか	緊急事態の選定(リスク)に及び活動とその技術移転方法、取り組み支援の方法(アプローチ)は適切であったか	活動内容は緊急事態に必要であったか?	活動内容は緊急事態に必要であったか?	活動内容は緊急事態に必要であったか?	
		協力が本案件に協力する上での有効性や技術/ノウハウはあったか?	協力が本案件に協力する上での有効性や技術/ノウハウはあったか?	プロジェクト開始時及び活動方針(特に活動プログラム「協力プログラム」環境改善)は、全体から見た位置づけ	プロジェクト開始時及び活動方針(特に活動プログラム「協力プログラム」環境改善)は、全体から見た位置づけ	プロジェクト開始時及び活動方針(特に活動プログラム「協力プログラム」環境改善)は、全体から見た位置づけ	
		プロジェクト実施計画は適当であったか(PDMの適用性も含め)	プロジェクト実施計画は適当であったか(PDMの適用性も含め)	PDMの適用性(活動計画、協力関係計画、協力関係計画、協力関係計画)は、PDMの適用性が適切に示されたか(必要事項)	PDMの適用性(活動計画、協力関係計画、協力関係計画、協力関係計画)は、PDMの適用性が適切に示されたか(必要事項)	PDMの適用性(活動計画、協力関係計画、協力関係計画、協力関係計画)は、PDMの適用性が適切に示されたか(必要事項)	
有効性	日本の技術/ノウハウの比較優位性	我が国が本案件に協力する上での有効性や技術/ノウハウはあったか?	我が国が本案件に協力する上での有効性や技術/ノウハウはあったか?	過去の協力実績や本件協力の開始の経緯、背景、日本人コンサルタントの技術優位性を考察	過去の協力実績や本件協力の開始の経緯、経緯、優位性、専門家の観察	過去の協力実績や本件協力の開始の経緯、経緯、優位性、専門家の観察	
		プロジェクト実施計画は適当であったか(PDMの適用性も含め)	プロジェクト実施計画は適当であったか(PDMの適用性も含め)	プロジェクト実施計画は適当であったか(PDMの適用性も含め)	プロジェクト実施計画は適当であったか(PDMの適用性も含め)	プロジェクト実施計画は適当であったか(PDMの適用性も含め)	
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インパクト	上位目標達成の見込み	プロジェクト実施計画は適当であったか(PDMの適用性も含め)	プロジェクト実施計画は適当であったか(PDMの適用性も含め)	プロジェクト実施計画は適当であったか(PDMの適用性も含め)	プロジェクト実施計画は適当であったか(PDMの適用性も含め)	プロジェクト実施計画は適当であったか(PDMの適用性も含め)	
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持続性	投入に合わせた活動/成果が達成されているか	投入に合わせた活動/成果が達成されているか	投入に合わせた活動/成果が達成されているか	C/Pの配置と役割、運営(スタッフの確保)	C/Pの配置と役割、運営(スタッフの確保)	C/Pの配置と役割、運営(スタッフの確保)	
		投入に合わせた活動/成果が達成されているか	投入に合わせた活動/成果が達成されているか	各マニュアル(設備診断、環境改善報告書、リハビリ計画書)とリハビリ計画書(リハビリ計画、環境改善計画)は、一貫性のある内容でまとめられているか? (リハビリ計画、環境改善計画)の作成(あるいは決定)は、適切なタイミングで行われたか?	各マニュアル(設備診断、環境改善報告書、リハビリ計画書)とリハビリ計画書(リハビリ計画、環境改善計画)は、一貫性のある内容でまとめられているか? (リハビリ計画、環境改善計画)の作成(あるいは決定)は、適切なタイミングで行われたか?	各マニュアル(設備診断、環境改善報告書、リハビリ計画書)とリハビリ計画書(リハビリ計画、環境改善計画)は、一貫性のある内容でまとめられているか? (リハビリ計画、環境改善計画)の作成(あるいは決定)は、適切なタイミングで行われたか?	
		投入に合わせた活動/成果が達成されているか	投入に合わせた活動/成果が達成されているか	技術移転(リハビリ計画、環境改善計画)は、適切なタイミングで行われたか?	技術移転(リハビリ計画、環境改善計画)は、適切なタイミングで行われたか?	技術移転(リハビリ計画、環境改善計画)は、適切なタイミングで行われたか?	
		投入に合わせた活動/成果が達成されているか	投入に合わせた活動/成果が達成されているか	合同調整委員会は、適切に機能したか	合同調整委員会は、適切に機能したか	合同調整委員会は、適切に機能したか	
		投入に合わせた活動/成果が達成されているか	投入に合わせた活動/成果が達成されているか	上位目標とプロジェクト目標は一致しているか、またその貢献はどうか	上位目標とプロジェクト目標は一致しているか、またその貢献はどうか	上位目標とプロジェクト目標は一致しているか、またその貢献はどうか	
		投入に合わせた活動/成果が達成されているか	投入に合わせた活動/成果が達成されているか	政策・組織的なインパクトは何か	政策・組織的なインパクトは何か	政策・組織的なインパクトは何か	
		投入に合わせた活動/成果が達成されているか	投入に合わせた活動/成果が達成されているか	技術的なインパクトは何か	技術的なインパクトは何か	技術的なインパクトは何か	
		投入に合わせた活動/成果が達成されているか	投入に合わせた活動/成果が達成されているか	環境的なインパクトは何か	環境的なインパクトは何か	環境的なインパクトは何か	
		投入に合わせた活動/成果が達成されているか	投入に合わせた活動/成果が達成されているか	経済的なインパクトは何か	経済的なインパクトは何か	経済的なインパクトは何か	
		投入に合わせた活動/成果が達成されているか	投入に合わせた活動/成果が達成されているか	予期されなかった正負の影響や変化はあったか	予期されなかった正負の影響や変化はあったか	予期されなかった正負の影響や変化はあったか	
戦略	(1)制度・政策・組織の側面	スタッフの定着度と活動の持続性、リハビリの実施、研修事業の維持	スタッフの定着度と活動の持続性、リハビリの実施、研修事業の維持	今後の事業展開(リハビリ計画)の実行、研修事業の継続、人材の確保(確保)、国家の方針と予算計画(人材、研修計画、エネルギー効率化や環境整備)に向けて	今後の事業展開(リハビリ計画)の実行、研修事業の継続、人材の確保(確保)、国家の方針と予算計画(人材、研修計画、エネルギー効率化や環境整備)に向けて	今後の事業展開(リハビリ計画)の実行、研修事業の継続、人材の確保(確保)、国家の方針と予算計画(人材、研修計画、エネルギー効率化や環境整備)に向けて	
		MENR及びEUIASの組織構造/体制と今後の組織展開	MENR及びEUIASの組織構造/体制と今後の組織展開	EUIAS本部(特にリハビリ計画)の組織体制(改善点)は、今後の活動に必要か? (改善点)は、今後の活動に必要か?	EUIAS本部(特にリハビリ計画)の組織体制(改善点)は、今後の活動に必要か? (改善点)は、今後の活動に必要か?	EUIAS本部(特にリハビリ計画)の組織体制(改善点)は、今後の活動に必要か? (改善点)は、今後の活動に必要か?	
		C/Pの技術/ノウハウの定着度	C/Pの技術/ノウハウの定着度	個別技術及び組織での技術/ノウハウ、リハビリと研修計画や実施能力	個別技術及び組織での技術/ノウハウ、リハビリと研修計画や実施能力	個別技術及び組織での技術/ノウハウ、リハビリと研修計画や実施能力	
		技術の定着度・普及の仕組み	技術の定着度・普及の仕組み	他地域への普及の可能性	他地域への普及の可能性	他地域への普及の可能性	
		(2)技術的側面	(2)技術的側面	EUASの財務的持続性の確保(研修実施計画)の確保(研修、経費の確保)	EUASの財務的持続性の確保(研修実施計画)の確保(研修、経費の確保)	EUASの財務的持続性の確保(研修実施計画)の確保(研修、経費の確保)	
		C/P関係及び関係機関の財政状況	C/P関係及び関係機関の財政状況	本件終了時点で残された負債とその返済について(さらに相手国側の返済やニーズがあれば、その返済)	本件終了時点で残された負債とその返済について(さらに相手国側の返済やニーズがあれば、その返済)	本件終了時点で残された負債とその返済について(さらに相手国側の返済やニーズがあれば、その返済)	
		(4)その他懸念・検討事項(提言、教訓)は何か	(4)その他懸念・検討事項(提言、教訓)は何か	低コストプロトタイプについて(低コストプロトタイプ)のメリットやデメリット	低コストプロトタイプについて(低コストプロトタイプ)のメリットやデメリット	低コストプロトタイプについて(低コストプロトタイプ)のメリットやデメリット	
		トルコにおける分野への支援の方向性や教訓	トルコにおける分野への支援の方向性や教訓	トルコにおける分野への支援の方向性や教訓	トルコにおける分野への支援の方向性や教訓	トルコにおける分野への支援の方向性や教訓	
		C/P-Counterpart Staff EUIAS-Electric Generation Company, JCC-Joint Coordinating Committee, MENR-Ministry of Energy and National Resources, M/M-Minutes of Meeting	C/P-Counterpart Staff EUIAS-Electric Generation Company, JCC-Joint Coordinating Committee, MENR-Ministry of Energy and National Resources, M/M-Minutes of Meeting	C/P-Counterpart Staff EUIAS-Electric Generation Company, JCC-Joint Coordinating Committee, MENR-Ministry of Energy and National Resources, M/M-Minutes of Meeting	C/P-Counterpart Staff EUIAS-Electric Generation Company, JCC-Joint Coordinating Committee, MENR-Ministry of Energy and National Resources, M/M-Minutes of Meeting	C/P-Counterpart Staff EUIAS-Electric Generation Company, JCC-Joint Coordinating Committee, MENR-Ministry of Energy and National Resources, M/M-Minutes of Meeting	C/P-Counterpart Staff EUIAS-Electric Generation Company, JCC-Joint Coordinating Committee, MENR-Ministry of Energy and National Resources, M/M-Minutes of Meeting

The Project for Energy Efficiency Improvement of Power Plant in Turkey

Evaluation Grid

(This Grid was prepared and finalized by Joint Evaluation Team.)

Oct. 2008

Criteria	Indicators	Source of Information	Method
Relevance	1.Relevance of the Project for Turkish government's policy	Energy Policy papers, Preliminary Evaluation Report, R/D, M/M, Interview with MENR/EUAS staff, Questionnaire	To confirm as to whether the Project is still meaningful along with the current energy policy (priority and direction of rehabilitation of power plants in Turkey)
	2.Relevance of the Project for the needs of target group (beneficiaries)	Preliminary Evaluation Report, R/D, M/M, Inception Report, Interview with C/P and J/E, Questionnaire	To confirm as to whether the Project is still meaningful for the current situation of target group (=EUAS) in the Project areas (=Orhaneli Power Plant)
	3.Relevance of the identification and selection of target group	Preliminary Evaluation Report, R/D, M/M, Inception Report, Interview with C/P and J/E, Questionnaire	To confirm as to whether the identification and selection of target group were appropriate
	4.Consistency with the Japanese aid policy	Preliminary Evaluation Report, Country Strategy Paper, Interview with J/E & JICA Turkey Office	To confirm as to whether the Project is relevant for the Japanese aid policies
Effectiveness	1.Achievement of Project Purpose	Preliminary Evaluation Report, R/D, M/M, Inception Report, Project Documents & Materials, Progress Reports, PDM, PO, Interview with C/P and J/E, Questionnaire	To confirm as to whether project purpose was achieved as expected. (Project Purpose="The capacity for energy efficiency improvement at model power plant (Orhaneli) is improved.") 1) At Orhaneli power plant, equivalent or better cost-performance rehabilitation plan is developed compared to outsourcing rehabilitation plans of same size power plants 2) The reports ,plans, specifications and manuals which are made by the project are adopted by EUAS
	2.Contribution of Project outputs to the Project Purpose	Preliminary Evaluation Report, R/D, M/M, Inception Report, Project Documents & Materials, Progress Reports, PDM, PO, Interview with C/P and J/E, Questionnaire	To confirm as to whether the each output contributed to the achievement of the Project purpose "Output" are as below; 1) The skills of C/Ps for equipment diagnosis are developed 2) The skills of C/Ps for environmental measure are developed 3) The skills of C/Ps for planning of rehabilitation are developed 4) The skills of C/Ps for designing of rehabilitation are developed 5) The skills of C/Ps for operation and maintenance of power facility are developed 6) The training system of EUAS for energy efficiency improvement is enhanced
3. Analysis of the factors	3.1 Promoting factors	Preliminary Evaluation Report, Project Documents & Materials, Progress Reports, PDM, PO, Interview with C/P and J/E, Questionnaire	To confirm as to what are the positive factors that encouraged the achievement of the Project purpose
	3.2 Hampering factors	Preliminary Evaluation Report, Project Documents & Materials, Progress Reports, PDM, PO, Interview with C/P and J/E, Questionnaire	To confirm as to what are the negative factors that inhibited the achievement of the Project purpose

Efficiency	1. Efficiency of the inputs					
	1.1 Dispatch of Japanese experts (timing, amount, quality)	Project Documents (Personnel Input Records Sheet), Progress Reports, Interview with C/P and J/E, Questionnaire	To confirm as to whether the timing, amount and capability of the Japanese experts was appropriate			
	1.2 Allocation of Turkish C/Ps (numbers, technical quality and timing)	Project Documents (Personnel Input Records Sheet), Progress Reports, Interview with C/P and J/E, Questionnaire	To confirm as to whether the Input was carried out as planned in terms of amount, and the degree of satisfaction in terms of ability, timing and attachment.			
	1.3 C/P Training in Japan (amount, quality)	Project Documents (Personnel Input Records Sheet), Training Reports, Interview with C/P and J/E, Questionnaire	To confirm as to whether the C/Ps' training was carried out as planned in terms of amount, and the degree of satisfaction in terms of contents			
	1.4 Financial inputs (timing and amount)	Project Documents (Budget Records Sheet), Progress Reports, Interview with C/P and J/E	To ask about the degree of satisfaction of the timing and amount of budgetary/operational cost shared by Turkey and Japan			
	2. The utilizing the inputs					
	2.1 The degree/level of utilizing the inputs	Project Documents (Personnel Input Records Sheet), Interview with C/P and J/E, Questionnaire	To confirm as to whether the equipment, personnel, and budget allocated to the Project were appropriately utilized for the Project			
	3. Project Management					
	3.1 Support and management system for the Project	Project Documents, JCC Records, Interview with C/P and J/E, Questionnaire	To confirm as to whether the support and management system functioned efficiently			
	3.2 Monitoring system	Project Documents, JCC Records, Interview with C/P and J/E, Questionnaire	To confirm as to whether the monitoring activities were carried out efficiently			
	Impacts	1 Degree of achievement of the Project Purpose and prospect of achieving the Overall Goal	Project Documents (Personnel Input Records Sheet), JCC Records, Interview with C/P and J/E, Questionnaire	To expect as to the degree to what the Project Purpose will be achieved and the prospect of achieving the Overall Goal in 2-6 years after the Project completion		
		2. Direct/Indirect Impacts with expected and/or unexpected factors				
		2.1 Impact on policy/institutional level	Project Documents & Materials, Progress Reports, Interview with MENR/EUAS staff, C/P and J/E, Questionnaire	To expect as to whether the Project had impact at this stage positively and/or negatively, such as;		
		2.2 Impact on technical level		1) Planning of the execution of power plant rehabilitation 2) Utilization and dissemination of technology and manual gained through the project 3) Possibility of disseminating the project outputs toward other power plants in Turkey 4) Impact on reduce environmental load 5) others		
2.3 Impact on environmental level						
2.4 Impact economical/cultural/social level						
3 Other impacts		Project Document & Materials, Progress Reports, Interview with MENR/EUAS staff, C/P and J/E, Questionnaire	To expect as to whether other impacts have been brought by the Project			

Sustainability	1 Policy / Institution / System	Govt. Policy Papers, Progress & Completion Reports, Interview with MENR/EUAS and C/P, Questionnaire	To ask as to whether it is expected that the activities/effects of the Project results will continue after the Project completion
1.1 Continuity of the effects of the Project	1.2 Administrative System (focus on MENR & EUAS's role and function)	Interview with MENR/EUAS, C/P and J/E, Questionnaire	To ask as to whether administrative and management system of MENR and EUAS will be likely to be well organized
2 Technology / Know-how	2.1 Continuity for C/Ps and ex-trainees to execute current activities in its organization	Progress & Completion Report, Interview with trainees, C/P and J/E, Questionnaire	To check as to how C/Ps will be able to utilize the acquired skills and experiences for O&M and Training program through the Project. Also to check the C/Ps' continuity of the Project outcomes after the Project's end
2.2 Dissemination of Project effects to other sites in Turkey	3 Finance	Progress & Completion Report, Interview with trainees, EUAS, C/P and J/E, Questionnaire	To check as to whether the Project activities or mechanism acquired through the Project is likely to be disseminated to other sites in Turkey after the Project's end
3.1 Financial condition of EUAS	3.2 Possibility of securing Power plant rehabilitation in action	Progress & Completion Report, Interview with trainees, EUAS, C/P and J/E, Questionnaire	To expect as to whether the MENR/EUAS financial budget will be stable or secured. Also to check the financial preparation for rehabilitation of power plants
4. Others		Progress & Completion Report, Interview with MENR/EUAS, C/P and J/E, Questionnaire, Relevant support organizations	To ask as to whether the financial resources for Power plant rehabilitation will be secured and in action

Abbreviation: APO=Annual Plan of Operation, C/P=Counterpart Staff, EUAS=Electric Generation Company, JCC=Joint Coordinating Committee, MENR=Ministry of Energy and National Resources, M/M=Minutes of Meeting, O&M=Operation and Maintenance, J/E=Japanese Experts

29th, September 2008

Mr. Tayfun ACIL
Deputy Director General, Electricity Generation Company (EUAS)
(Project Director)

Dear Sir;

We would like to take this opportunity to inform you that we will be conducting the **Terminal Evaluation of the Project for Energy Efficiency Improvement of Power Plant in Turkey.**

The Evaluation study mission will be dispatched to Turkey from 16th October to 28th October 2008. We would like you to understand in advance our purpose of study as explained below and assist us for fulfilling the objectives of the mission.

We would highly appreciate your kind cooperation and look forward to discussing further details when we meet.

Best regard,

Akira NIWA
Team Leader, Terminal Evaluation Study Team, JICA Head Office

Project Name: Terminal Evaluation Study on the Project on Terminal Evaluation Study Team for the Project for Energy Efficiency Improvement of Power Plant in Turkey.

1. Objective of the Final Evaluation Study

The objectives of this evaluation study are:

- (1) To examine, with respect to the Project Design Matrix (PDM), the actual performance of the "Project for Energy Efficiency Improvement of Power Plant in Turkey" (hereinafter called as "the Project"),
- (2) To study the extent to which the expected outputs or project purpose in this Project has been achieved, or are expected to be achieved,
- (3) To summarize the achievements of the Project, as well as making a recommendation and lessons learned from the experiences.
- (4) To report or propose the results of the discussion to the concerned authorities of the Governments of Turkey and Japan.

The evaluation will be conducted as joint efforts of both parties of Turkish Evaluation team members and Japanese Evaluation team.

2. Methodology of Evaluation

2-1. Method of Evaluation

The Project Cycle Management (PCM) method will be used in the evaluation. We will:

- (1) Confirm the achievements or its prospects of the Project in terms of the project purpose and outputs stated in the PDM.
- (2) Conduct the evaluation in accordance with the five criteria, namely of Relevance, Effectiveness, Efficiency, Impact, and Sustainability.

2-2. Key Criteria of Evaluation

The five (5) criteria are:

- (1) **Relevance:** The degree to which the objectives of the Project are significant and worthwhile in relation to the priority needs and concerns of the Republic of Turkey as well as the needs of beneficiaries (EUAS):
- (2) **Effectiveness:** Assessment by evaluating the extent to which the Project has achieved and contributed to the beneficiaries:
- (3) **Efficiency:** Analysis focusing on the relationship between outputs and inputs in terms of timing, quality and quantity:
- (4) **Impact:** The positive and negative changes produced directly or indirectly caused by implementing the Project:
- (5) **Sustainability:** Forecast in policy, system, technology, and financial state aspects by examining the extent to which the achievement of the Project would be sustained or expanded after the Project is completed.

2-3. Questionnaire for Final Evaluation Study

The attached questions Annex1-1, Annex1-2, Annex1-3 and Annex1-4 are designed to assess the performance and implementation process of the Project.

Annex1-1 is the QA sheet directed separately to the Deputy Director General, Head of Thermal Power Plant Operation & Maintenance Department, and Head of Training Department of EUAS headquarters.

Annex1-2 is the QA sheet directed to counterpart members of the Project at Orhaneli power plant. The QA should be answered by the leaders of the working group (WG) at Orhaneli power plant, namely of WG for plant diagnosis improvement, WG for environmental measure improvement, WG for rehabilitation plan and design improvement, WG for operation and maintenance improvement, and WG for training system enhancement.

Annex1-3 is the QA sheet directed to the ex-trainees who participated in Training in Japan during the Project period.

Finally, Annex1-4 is the QA sheet directed to the official in charge of power sector in Ministry of Energy and National Resources (MENR).

We would be most grateful if you and your staff can answer the QA properly and send them back to the Japanese Expert team members or JICA Turkey office, by this coming 10th October 2008.

< Attached Documents >

ANNEX 1-1: Questionnaire for Deputy Director General, Head of Thermal Power Plant Operation and Maintenance Department, and Head of Training Department, EUAS Headquarters

ANNEX 1-2: Questionnaire for C/P (Orhaneli Power Plant)

ANNEX 1-3: Questionnaire for Ex-trainees who participated in Training in Japan

ANNEX 1-4: Questionnaire for the person in charge for power sector in Ministry of Energy and National Resources (MENR)

September, 2008

**Terminal Evaluation of the Project for Energy Efficiency Improvement of Power Plant
In Turkey**

**Questionnaire for Terminal Evaluation Study for Deputy Director General, Head of Thermal
Power Operation and Maintenance Department, and Head of Training
Department of EUAS Headquarters**

The following questions are designed to assess the performance and implementation process of the project, "Terminal Evaluation of the Project for Energy Efficiency Improvement of Power Plant in Turkey" (herein after called as "the Project").

Please answer the questions by marking the suitable choice with an (X) followed by an explanation for that choice. If necessary, please pass on this questionnaire to the appropriate persons.

We would be most grateful if you would send your reply the following questions in written form. Thank you in advance for your kind cooperation.

Terminal Evaluation Team

Answered by: _____

Position/ Department: _____

Questionnaire for Terminal Evaluation Study

1. The Project Implementation Process

1.1 Implementation of the Project Planning

Question 1: Do you think the project was implemented according to the schedule?

- Significantly and smoothly implemented as schedule
- Mostly implemented as schedule
- Not implemented as schedule (it means slightly delay and change)

Explanation: _____

1.2 Technical Transfer from Experts

Question 2: Do you think that the quantity and quality of the technical transfer from Japanese experts was satisfactory?

And please describe the reason and any story you would like to comment.

- Very Satisfactory
- Satisfactory
- Moderate
- Not satisfactory

Explanation: _____

2. Relevance of the Project

Question 3: Did the Project meet the needs of Turkey for control and reduction of the greenhouse gas emission by energy efficiency improvement in power plants?

And please describe your opinion and any story you have.

- Completely meets
 Does not meet in some aspects
 Does not meet

Explanation: _____

Question 4: Do you think that the Project activities were appropriate according to the target groups' needs? And please describe the reason below. ("target groups"=Orhaneli)

- Yes
 No

Explanation: _____

Question 5: Do you think that the Project was useful for developing rehabilitation plan at Orhaneli power plants? Please submit the relevant documents and data as an attachment to QA. (Please answer by the Head of Thermal Power Operation and Maintenance Department of EUAS.)

Explanation: _____

3. Project Activities and Results (Please answer by the Head of Training Department of EUAS.)

Question 6: <Enhancement of training system of EUAS for energy efficiency improvement>; Please explain about what kind of actions and measures on enhancement of training system of EUAS had been implemented or planned for implementation?

Explanation: _____

4. Effectiveness of the Project

Question 7: Do you think the Project had achieved the project purpose?

And please describe the reason included. ("project purpose"=The capacity for energy efficiency improvement at model power plant (Orhaneli) is improved.)

- Highly Achieved
 Mostly Achieved
 Not well Achieved

Explanation: _____

Question 8: What was the most influential factor which determined the level of achievement of the Project purpose? Please describe your opinion.

Answer: _____

5. Efficiency of the Project

Question 9: Do you think the quantity, quality, and timing of the various inputs from the Japanese experts were adequate in achieving the Project outputs? Please mark the suitable choice with an (X).

- Completely reasonable/ adequate
 Mostly reasonable/ adequate
 Mostly inadequate

Explanation: On the all above, please explain if your choice is either “mostly reasonable” or “mostly inadequate”.

6. Impacts of the Project

Question 10: What are the main positive impacts generated by the Project?

Please mark the suitable choice with an (X) below (multiple choice are OK), and state any good example.

- | | |
|---|---|
| <input type="checkbox"/> Policy / Institutional Impacts | <input type="checkbox"/> Technical Impacts |
| <input type="checkbox"/> Environmental Impacts | <input type="checkbox"/> Economical Impacts |
| <input type="checkbox"/> Cultural / Social Impacts | <input type="checkbox"/> Others <input type="checkbox"/> None |

Explanation: _____

Question 11: Are there any other negative and unexpected impacts? If you have, please describe the reasons frankly.

Answer: _____

7. Sustainability of the Project

Question 12: Judging from the skills and technologies acquired by the Project counterpart staffs, do you think that EUAS will be able to continuously strengthen its capacity and take a leading role on its activities for energy efficiency, even after the Project?

- Yes
- To a certain extent
- No

Explanation: _____

Question 13: Regarding the technical manuals and documents produced under the project, how will you utilize them and disseminate to all the power plants of EUAS? Please describe your opinion.

Answer: _____

Question 14: What are the necessary steps and/or actions required to continue and expand the outcomes of the Project? Please describe your opinion.

Answer: _____

Question 15: Are there any problems hampering the sustainability? Please describe the reasons. Also if you have any matters you want to discuss in this opportunity, please express your opinion.

Answer: _____

Thank you very much for taking the time to answer this questionnaire. I will see you soon to discuss further details on your answers.

September, 2008

**Terminal Evaluation of the Project for Energy Efficiency Improvement of Power Plant
In Turkey**

Questionnaire for Terminal Evaluation Study for C/P (Orhaneli Power Plant)

The following questions are designed to assess the performance and implementation process of the project, "Terminal Evaluation of the Project for Energy Efficiency Improvement of Power Plant in Turkey" (herein after called as the "Project").

Please answer the questions in by marking the suitable choice with an (X) followed by an explanation for that choice. If necessary, please pass on this questionnaire to the appropriate persons.

We would be most grateful if you would send your reply the following questions in written form. Thank you in advance for your kind cooperation.

Terminal Evaluation Team

Answered by: _____

Position/ Division: _____

Questionnaire for Terminal Evaluation Study

1. The Project Implementation Process

1.1 Implementation of the Project Planning

Question 1: Do you think the project was implemented according to the schedule?

- () Significantly and smoothly implemented as schedule
 () Mostly implemented as schedule
 () Not implemented as schedule (it means slightly delay and change)

Explanation: _____

1.2 Process and Results of "On-the-Job training" (OJT) and "Working Group" Activities

Question 2: Do you think that "On-the-Job training" (OJT) and "Working Group" activities were satisfactorily conducted? And please describe the reason and any story you have.

- () Very Satisfactory () Satisfactory
 () Moderate () Not satisfactory

Explanation: _____

1.3 Technical Transfer from Japanese Experts

Question 3: Do you think that Technical Seminars were satisfactorily conducted by Japanese Experts?

And please describe the reason and any story you have.

- () Very Satisfactory
 () Satisfactory
 () Moderate
 () Not satisfactory

Explanation: _____

2. Relevance of the Project

Question 4: Did the Project meet the needs of Turkey for control and reduction of the greenhouse gas emission by improvement of energy efficiency in power plants?

And please describe your opinion and any story you have.

- Completely meets
 Does not meet in some aspects
 Does not meet

Explanation: _____

Question 5: Do you think that the Project activities were matching to the needs of Orhaneli power plant, especially for “On-the-Job training (OJT)”, “Technical Seminar” and “Training in Japan”? And please describe the reason below.

- Yes
 No

Explanation: _____

Question 6: Do you think that the Project duration (two years) were appropriate to achieve the target of the Project outputs? And please describe the reason below.

- Yes
 No

Explanation: _____

3. Project Activities and Results (Please answer by the leader of the relevant working group.)

Question 7-1: <Development of skills on Equipment Diagnosis>;

How were you satisfied with the Project activities on development of skills on equipment diagnosis? Please mark the suitable choice with an (X) below.

- 1- Satisfied in many points, 2- Satisfied in some points,
 3- Not so much

Please explain about what kind of actions and measures were implemented already or planned for implementation at Orhaneli power plant for equipment diagnosis. Please elaborate on the general conditions of the facility, specific method and criteria of diagnosis used, safety and hygiene conditions, and others.

Answer: _____

Question 7-2: <Development of skills on Plan and Design of Rehabilitation>;

How were you satisfied with the Project activities on development of skills on plan and design of rehabilitation? Please mark the suitable choice with an (X) below.

- 1-() Satisfied in many points, 2-() Satisfied in some points,
3-() Not so much

Please explain about what kind of actions and measures were implemented already or planned for implementation at Orhaneli power plant for plan and design of rehabilitation. Please elaborate on the general concept, work flows of rehabilitation formulation, methods of rehabilitation plan and examination and selection, and others.

Answer: _____

Question 7-3: <Possibility for implementation of complete Exciter system rehabilitation at Orhaneli power plant>; Please mark the suitable choice with an (X) below.

- () Possible by C/P members
() Possible with some advice by JICA or other members

Question 7-4: < Development of skills on Environmental measure>;

How were you satisfied with the Project activities on development of skills on environmental measure? Please mark the suitable choice with an (X) below.

- 1-() Satisfied in many points, 2-() Satisfied in some points,
3-() Not so much

Please explain about what kind of actions and measures were implemented already or planned for implementation at Orhaneli power plant for environmental measure. Please elaborate on the general concept, inspection items, assessment of DeSOx equipment conditions and countermeasure, and others.

Answer: _____

Question 7-5: <Development of skills on Operation and Maintenance of power facility>;

How were you satisfied with the Project activities on development of skills on operation and maintenance of power facility? Please mark the suitable choice with an (X) below.

- 1-() Satisfied in many points, 2-() Satisfied in some points,
3-() Not so much

Please explain about what kind of actions and measures were implemented already or planned for implementation at Orhaneli power plant for operation and maintenance of power facility. Please elaborate on the general concept, trouble cases and trouble shooting used, preventive maintenance and remaining life assessment, upgrading of repair/maintenance planning, daily inspection check sheet, contents of periodic inspection, and others.

Answer: _____

Question 7-6: <Preventive maintenance>;

How far is it expected to be developed?

Please mark the suitable choice with an (X) below.

- Preventive maintenance to be practically applied
 Technology is to be transferred
 Documents are to be shared.

Question 7-7: <Enhancement of training system of EUAS for energy efficiency improvement>;

How were you satisfied with the Project activities on enhancement of training system of EUAS for energy efficiency improvement? Please mark the suitable choice with an (X) below.

- 1- Satisfied in many points, 2- Satisfied in some points,
 3- Not so much

Please explain about what kind of actions and measures were implemented already or planned for implementation at Orhaneli power plant for training system of EUAS for energy efficiency improvement. Please elaborate on the general concept, training items for EUAS operation/maintenance engineers, and others.

Answer: _____

4. Effectiveness of the Project

Question 8: Do you think the Project had achieved the project purpose satisfactorily?

And please describe the reason included. ("project purpose"= The capacity for energy efficiency improvement at Orhaneli power plant is improved.)

- Highly Achieved
 Mostly Achieved
 Not well Achieved

Explanation: _____

5. Efficiency of the Project

Question 9: Do you think that the numbers, level of cooperation, input timing and usage of the Japanese experts were adequate to achieve the targets of the Project? Please mark the suitable choice with an (X).

- Completely reasonable/ adequate
 Mostly reasonable/ adequate
 Mostly inadequate

Explanation: On the all above, please explain if your choice is either “mostly reasonable” or “mostly inadequate”.

6. Impacts of the Project

Question 10: What are the main positive impacts generated by the Project?
Please mark the suitable choice with an (X) below (multiple choice are OK), and state any good example.

- Policy / Institutional Impacts Technical Impacts
- Environmental Impacts Economical Impacts
- Cultural / Social Impacts Others None

Explanation: _____

Question 11: Do you think the counterpart members at Orhaneli can plan and design rehabilitation by themselves in the future?
Please mark the suitable choice with an (X) below (multiple choice are OK), and state any reasons behind.

- Possible for Exciter system Possible for Boiler system
- Possible for Turbine system Possible for other systems
- Some help will be necessary

Answer: _____

7. Sustainability of the Project

Question 12: How do you maintain and develop the transferred skills and technology acquired through the Project, even after the Project?

Explanation: _____

Question 13: Do you think that what are the necessary steps and/or action to continue and expand the outcomes of the Project? Please describe your opinion.

Answer: _____

Question 14: Are there any problems hampering the sustainability? Please describe the reasons. Also if you have any matters you want to discuss in this opportunity, please express your opinion included.

Answer:

Thank you very much for taking the time to answer this questionnaire. I will see you soon to discuss further details on your answers.

September, 2008

**Terminal Evaluation of the Project for Energy Efficiency Improvement of Power Plant
In Turkey**

**Questionnaire for Terminal Evaluation Study for Ex-trainees who participated in Training in
Japan**

The following questions are designed to assess the performance and implementation process of the project, "Terminal Evaluation of the Project for Energy Efficiency Improvement of Power Plant in Turkey" (herein after called as the "Project").

Please answer the questions in by marking the suitable choice with an (X) followed by an explanation for that choice. If necessary, please pass on this questionnaire to the appropriate persons.

We would be most grateful if you would send your reply the following questions in written form. Thank you in advance for your kind cooperation.

Terminal Evaluation Team

Answered by: _____

Position/ Division: _____

Questionnaire for Terminal Evaluation Study

1. Training Result & Utilization

Question 1: How do you utilize the skill and knowledge acquired in the training?

Answer: _____

Question 2: After the training, have you shared already the skill and knowledge among other staffs of your organization? Please explain about the method and content of the activities.

- () Quite often to share the lessoned learned with other staff
 () A few time to share the lessoned learned with other staff
 () No chance to share the lessoned learned with other staff

Explanation: _____

2. Impacts of the Project

Question 3: What are the main positive impacts of the training on your organization?

Please state your opinion.

Explanation: _____

3. Sustainability of the Project

Question 4: Please explain about the progress of implementation of your “Action Plan” which you formulated during the training in Japan? In additions, how do you overcome the constraints and any problems encountered and modify the action plan? Please describe your opinion.

Answer:

Thank you very much for taking the time to answer this questionnaire. I will see you soon to discuss further details on your answers.

September, 2008

**Terminal Evaluation of the Project for Energy Efficiency Improvement of Power Plant
In Turkey**

**Questionnaire for Terminal Evaluation Study for the official in charge for power sector
in Ministry of Energy and National Resources (MENR)**

The following questions are designed to assess the performance and implementation process of the project, "Terminal Evaluation of the Project for Energy Efficiency Improvement of Power Plant in Turkey" (herein after called as "the Project").

Please answer the questions by marking the suitable choice with an (X) followed by an explanation for that choice. If necessary, please pass on this questionnaire to the appropriate persons.

We would be most grateful if you would send your reply the following questions in written form. Thank you in advance for your kind cooperation.

Terminal Evaluation Team

Answered by: _____

Position/ Division: _____

Questionnaire for Terminal Evaluation Study

1. Relevance of the Project

Question 1: Did the Project meet the needs of Turkey? In order to promote energy strategy in Turkey, do you think how the Project contributed to control and reduce the greenhouse gas emission by energy efficiency improvement of power plants?

And please describe your opinion and any story you have.

- () Completely meets
() Does not meet in some aspects
() Does not meet

Explanation: _____

Question 2: Do you think that the Project activities were matching to the needs for energy efficiency improvement? And please describe the reason below.

- () Yes
() No

Explanation: _____

2. Impacts of the Project

Question 3: In the project Japanese skill and technology had been transferred to EUAS in order to improve its capacity for energy efficiency at coal power plant. How do you think you can disseminate the results of the project efforts? Please describe your opinion.

Answer: _____

Question 4: How do you think that this project contributed significantly for decreasing environmental load (burden) in Orhaneli power plants? Please describe your opinion.

Answer: _____

3. Sustainability of the Project

Question 5: Do you think that what are the necessary policy measures and strategies required to accelerate the development of the outcomes of the Project? Please describe your opinion.

Answer: _____

Question 6: Regarding the privatization process of the power sector in Turkey, do you foresee any influences on the project and the future sustainability? Please describe your opinion. Also if you have any matters you want to discuss in this opportunity, please express your opinion included.

Answer: _____

Thank you very much for taking the time to answer this questionnaire. I will see you soon to discuss further details on your answers.

Republic of Turkey



**Project for Energy Efficiency Improvement of Power Plant
in Turkey**

**Report
of
Analysis on Questionnaire & Interviews
for the Project Final Evaluation**

October 2008

**By
Akira Matsumoto
JICA Consultant**

**Electric Generation Company (EUAS), Ministry of Energy and
National Resources (MENR)**

Analysis on Questionnaire & Interviews for the Project Terminal Evaluation

Analyst: Akira Matsumoto (JICA Consultant)

TARGETED GROUP OF QUESTIONNAIRE & INTERVIEWS

	Distribution of Questionnaire	Responded/Returned Numbers	Interviews	Respondent rate (%) ^{*1}
Deputy Director General, Head of Thermal Power Plant Operation and Maintenance Department, and Head of Training Department, EUAS HQ	3(ANNEX1-1)	1	3	3(100%)
C/P (Orhaneli Power Plant) ^{*2}	4(ANNEX1-2)	4	8	8(100%)
Ex-trainees who participated in Training in Japan	6(ANNEX1-3)	6	3	6(100%)
The person in charge for power sector in Ministry of Energy	1(ANNEX1-4)	0	1	1(100%)
Japanese Experts ^{*3}	1(ANNEX1-5)	1	4	4(100%)
Grand total	15	12	19	22(100%)

^{*1} These are the ratio of respondents who returned their answers of questionnaire and/or took interviews. The manager and deputy manager of Orhaneli power plant were interviewed shortly, but there were no deliver the questionnaire.

^{*2} The questionnaire was distributed to the counterparts who are currently working at Orhaneli Power Plant, but not included who will retire soon. The deadline of returning of response was 15th October, 2008.

^{*3} The questionnaire was distributed to the Japanese experts, and being fulfilled just one paper as compiling together of all expert idea and opinion..

Questionnaire Process

The two kinds of questionnaire were distributed to the Project counterparts in Turkey as the target group of the Project. And the questionnaire was fulfilled by the respondents, and been returned and collected during the terminal evaluation. The replied questionnaire was confident and was analyzed according to the evaluation criteria.

Methodology and Objectives of Questionnaire

The questionnaire aims to grasp the opinion and ideas through the self-evaluation of the Project stakeholders, and specify the Project performance with deep concerns.

To fulfill the above objectives, the terminal evaluation team members constructed the questionnaire. The questionnaire was made from choosing answer as well as “free answer” which has an open style in the Q&A sheet. It aims to catch the “qualitative” way of evaluation, not “quantitative” way with numerous data accumulations.

Interview Process

The questionnaire was collected and analyzed by the terminal evaluation team members, and the interviews were arranged according to the grouping and the working place in Ankara as well as Orhaneli power plant. Then, the interviewing was very smoothly and well organized based on the evaluation study timetable.

Based on the questionnaire results, it is summarized as bellows.

Questionnaire for Terminal Evaluation Study

No.1-1: Deputy Director General, Head of Thermal Power Plant Operation and Maintenance Department, and Head of Training Department, EUAS Headquarters
Respondent: 1

1. The Project Implementation Process

1.1 Implementation of the Project Planning

Q1: Do you think the project was implemented according to the schedule?

Answer: Significantly and smoothly implemented as schedule 0
Mostly implemented as schedule 1 (100%) (No Explanation)
Not implemented as schedule (it means slightly delay and change) 0

1.2 Technical Transfer from Experts

Q2: Do you think that the quantity and quality of the technical transfer from Japanese experts was satisfactory?

Answer: Very Satisfactory 0 Satisfactory 1 (100%) (No Explanation)
Moderate 0 Not satisfactory 0

2. Relevance of the Project

Q3: Did the Project meet the needs of Turkey for control and reduction of the greenhouse gas emission by energy efficiency improvement in power plants?

Nil (No answer)

Q4: Do you think that the Project activities were appropriate according to the target groups' needs? ("target groups"=Orhaneli)

Answer: Yes 1 (100%) (No Explanation) No 0

Q5: Do you think that the Project was useful for developing rehabilitation plan at Orhaneli power plants? Please submit the relevant documents and data as an attachment to QA.

Nil (No answer)

3. Project Activities and Results (Please answer by the Head of Training Department of EUAS.)

Q6: <Enhancement of training system of EUAS for energy efficiency improvement>;

Explanation With the framework of action plan presented in Japan, knowledge and experience gained in the Project will be reflected to our training program starting from 2009. Translation of documents will be done in 2009.

4. Effectiveness of the Project

Q7: Do you think the Project had achieved the project purpose?

("project purpose"=The capacity for energy efficiency improvement at model power plant (Orhaneli) is improved.)

Answer: Highly Achieved 0 Mostly Achieved 1 (100%) (No Explanation)
Not well Achieved 0

Q8: What was the most influential factor which determined the level of achievement of the Project purpose?

Answer: Closing monitoring of project by EUAS and JICA and training in Japan

5. Efficiency of the Project

Q9: Do you think the quantity, quality, and timing of the various inputs from the Japanese experts were adequate in achieving the Project outputs?

Answer: Completely reasonable/ adequate 1(100%) (No Explanation)

No.1-2: C/P (Orhaneli Power Plant)

Respondent: 4

1. The Project Implementation Process

1.1 Implementation of the Project Planning

Q1: Do you think the project was implemented according to the schedule?

Answer: Significantly and smoothly implemented as schedule 2(50%)
Mostly implemented as schedule 2(50%)
Not implemented as schedule (it means slightly delay and change 0

- Planning was kept accurately.
- No Explanation (3)

1.2 Process and Results of “On-the-Job training” (OJT) and “Working Group” Activities

Q2: Do you think that “On-the-Job training” (OJT) and “Working Group” activities were satisfactorily conducted? And please describe the reason and any story you have.

Answer: Very Satisfactory 0 Satisfactory 4 (100%) Moderate 0
Not satisfactory 0

- Since the activities done were selected based on our technical needs and were applicable in plant, the project was satisfactory
- No Explanation (3)

1.3 Technical Transfer from Japanese Experts

Q3: Do you think that Technical Seminars were satisfactorily conducted by Japanese Experts?

Answer: Very Satisfactory 0 Satisfactory 3 (75%) Moderate 1(25%)
Not satisfactory 0

- Contents and presentation of technical seminars were selected and presented well. It would be better if the subjects on power plant main electricity protection were included.
- At technical seminars, technical translation was not enough.
- At technical seminars, may be due to the translation, technology transfer for the issues that are not reflected on power points were not done well.
- No Explanation

2. Relevance of the Project

Q4: Did the Project meet the needs of Turkey for control and reduction of the greenhouse gas emission by improvement of energy efficiency in power plants?

Answer: Completely meets 2(50%) Does not meet in some aspects 2(50%)
Does not meet 0

- Project met the needs of Turkey. However, practical application works/studies are necessary. We have DeSOx system but not deNOx system.
- This result will be achieved after maintenance
- Training in Japan could have been on more specific subjects and been more detailed. It would be better if interpreters have knowledge on electricity and mechanic. Project duration was 2-year but it could have planned shorter and denser.
- No Explanation

Q5: Do you think that the Project activities were matching to the needs of Orhaneli power plant, especially for “On-the-Job training (OJT)”, “Technical Seminar” and “Training in Japan”?

Answer: Yes 4(100%) No 0

- Since the activities done were selected based on our technical needs and were applicable in plant, the activities were satisfactory and match with our needs.
- Yes, it matches. But, since our technology is 1970’s technology, most of the mechanical equipment and automation system should be updated (and if necessary should be changed) for

more effective operation.

- Mostly it matches. Some of the activities mentioned above implemented at plant but some of them can not be implemented due to lack of technical equipment and knowledge.
- Training in Japan should have been more subject-focused and more detailed.

Q6: Do you think that the Project duration (two years) were appropriate to achieve the target of the Project outputs? And please describe the reason below.

Answer: Yes 2 (50%) No 2(50%)

- Project duration is enough but OJT studies in Turkey should be increased.
- Yes, the duration is enough. It is necessary to increase more practical/OJT studies (such as visiting more power plants)
- Project duration was not enough due to the fact that power plant electricity protection, electricity maintenance activities, visually supported simulation training at PET should be included in training.
- Project duration was 10-month in Turkey and 2-month in Japan. Having gap between field studies affected negatively our motivation.

3. Project Activities and Results (Please answer by the leader of the relevant working group.)

Q7-1: <Development of skills on Equipment Diagnosis>;

How were you satisfied with the Project activities on development of skills on equipment diagnosis?

Answer: Satisfied in many points 4(100%) Satisfied in some points 0 Not so much 0

- Explaining practical application of PT and MT, UT test methods were very useful. Theoretical and practical application of vibration analyses was extremely useful.
- Utilizing PT and MT test methods that was given at PET, widely at our plant enable us to determine cracks earlier.
- We are following test methods and system monitoring for equipment diagnosis. Controlling by thermal camera, performing vibration analyses, resistance measuring, isolation lubrication analyses are of some methods used.
- We are not executing predictive maintenance, executing breakdown maintenance. This is due to the fact that having old technology equipment; problems generated by coal (abrasive materials such as siliceous) are not solved (especially by Turkish Coal Enterprises) yet.

Q7-2: <Development of skills on Plan and Design of Rehabilitation>;

How were you satisfied with the Project activities on development of skills on plan and design of rehabilitation?

Answer: Satisfied in many points 3(75%) Satisfied in some points 1(25%) Not so much 0

- Regarding with the Plan and Design of Rehabilitation, high level energy efficiency, highly developed automation device and equipment are begun to be purchased instead of low-efficiently run, economically dead device and equipment.
- With performing daily and periodic monitoring and maintenance, more effective and efficient rehabilitation plan will be realized. As a result of this plan, more effective and efficient results will be obtained and more detailed rehabilitation plan will be done.
- Utilizing predictive maintenance works, while establishing the rehabilitation plan, is increasing. At the time of rehabilitation work flow preparation, it will be cleared that which work will be completed when, and stages of plan will be evaluated. At selection process, economic evaluation and technical qualification methods are begun to be used. It is initially used in excitation system rehabilitation, and will be expanded.
- More efficiently run pumps and compressors (high efficiency and low energy consumption) are purchased to our plant.

Q7-3: <Possibility for implementation of complete Exciter system rehabilitation at Orhaneli power plant>

Answer: Possible by C/P members 1(25%)

Possible with some advice by JICA or other members 1(25%)
No answer 2(50%)

Q7-4: < Development of skills on Environmental measure>;

How were you satisfied with the Project activities on development of skills on environmental measure?

Answer: Satisfied in many points 3(75%) Satisfied in some points 1(25%) Not so much 0

- Countermeasures are being taken for FBD system to work more efficiently and effectively. Countermeasures such as welding of abraded parts of pump ventilation of FBD system, updating of automation system
- I believe that since all systems in the plant operation are connected each other, improvement in boiler will positively affect DeSOx.
- Abrasion occurs in pumps at DeSOx system since the suspension contains abrasive materials. Japanese experts suggested covering it with tungsten carbide. We have tendered this issue two times but no firm conveyed estimation.
- No Explanation

Q7-5: <Development of skills on Operation and Maintenance of power facility>;

How were you satisfied with the Project activities on development of skills on operation and maintenance of power facility?

Answer: Satisfied in many points 4(100%) Satisfied in some points 0 Not so much 0

- We are using breakdown maintenance method. Instead of this, daily control forms and cards for equipments will be prepared. By realizing this, we can detect the type and frequency of failure, and more effective study will be done.
- We are not using predictive maintenance at our plant, breakdown maintenance method is applied. With the introduction of automation system, transferring to predictive maintenance will be easier. We partly utilize predictive maintenance method at screw compressors.
- As a general approach in operation and maintenance, continuous monitoring of equipment is performed. As failure detecting method, measuring value trend analyses, relay information that protects and controls the system, examining equipment control form, periodic controls, examining thermal cameras under protective maintenance concept, vibration analyses and tests done to equipment methods are used.
- Since our equipment is of old technology manufacturing, we are not using predictive maintenance at our plant, breakdown maintenance method is applied.

Q7-6: <Preventive maintenance>;

How far is it expected to be developed?

Answer: Preventive maintenance to be practically applied 3(75%)

Technology is to be transferred 1(25%)

Documents are to be shared 0

- No explanation (4)

Q7-7: <Enhancement of training system of EUAS for energy efficiency improvement>;

How were you satisfied with the Project activities on enhancement of training system of EUAS for energy efficiency improvement?

Answer: Satisfied in many points 4(100%) Satisfied in some points 0 Not so much 0

- Staff of our plant who needs training on weak points is dispatched to training centers to receive trainings
- With periodic and daily inspection and maintenance, life-time analysis in boiler pipes and predictive maintenance; loss will be diminished, and thus, energy efficiency will be improvement. Training titles are daily and periodic inspection, remaining life time etc.
- It is decided that disseminating knowledge to technical staff will be realized in seminar.
- High efficiency and low energy consumption pumps and compressors are purchased to our plant.

4. Effectiveness of the Project

Q8: Do you think the Project had achieved the project purpose satisfactorily?

Answer: Highly Achieved 0 Mostly Achieved 3(75%)
Not well Achieved 1(25%)

- Mostly achieved; however, all system (mechanic, electricity and automation) should be updated for more efficient and effective operation.
- Attained level is satisfactory. Technology transfer is realized within the Project concept. Technology transfer seminars were held to create efficiency development infrastructure. However, for full success of the Project, time is necessary. Sudden changes for comprehensive rehabilitation and system infrastructure is impossible. Project activities will be performed better with the time and more positive results will be obtained accordingly.
- Some of the activities done within the project context are completed and became sustainable. Infrastructure improvement works are being continued. That's why, I believe that results will be obtained later.
- Because, either training in Japan or training in Turkey, improvements that are planned and having good cooperation with manufacturers are emphasized. It is almost impossible at Orhaneli TPP.

5. Efficiency of the Project

Q9: Do you think that the numbers, level of cooperation, input timing and usage of the Japanese experts were adequate to achieve the targets of the Project?

Answer: Completely reasonable/ adequate 2(50%) Mostly reasonable/ adequate 2(50%)
Mostly inadequate 0

- Project was mostly focused on theoretical knowledge. VCD about power plants in Japan was less. In Japan, we had no chance to visit plants except PET and Shinoda. It is better to increase to number of plants to be visited (including nuclear power plant).
- No explanation (3)

6. Impacts of the Project

Q10: What are the main positive impacts generated by the Project?

Answer: Policy / Institutional Impacts 2 Technical Impacts 4(100%)
Environmental Impacts 2 Economical Impacts 2
Cultural / Social Impacts 1 Others 0 None 0

(Technical) Continuous measuring of cycle efficiency during operation of plant and planning of necessary activities.

Project had more positive contribution on technical impacts since the Project created a chance to technology transfer and provided technical infrastructure sample and examining.

Since the project focused on technical knowledge transfer, technical impacts were more.

(Economical) First of all, with the implementation of predictive maintenance, costs will be diminished.

Q11: Do you think the counterpart members at Orhaneli can plan and design rehabilitation by themselves in the future? (Multiple choice)

Answer: Possible for Exciter system 2 Possible for Boiler system 1
Possible for Turbine system 2 Possible for other systems 0
Some help will be necessary

- Experts have enough knowledge on mechanics, electricity and automation
- As a result of inspections and controls, we will have idea about remaining life which will guide us for rehabilitation plan and design. <Boiler system>
- Detailed and applicable knowledge on excitation system is transferred and performance and working of system was examined with experiments. With these knowledge and experience, rehabilitation plan and design can be done. < Exciter system>

- No explanation

7. Sustainability of the Project

Q12: How do you maintain and develop the transferred skills and technology acquired through the Project, even after the Project?

- Knowledge and experience gained should be reviewed with examining the whole plant again. Therefore, experience and technology were reviewed, and knowledge was not forgotten and is kept fresh. Development of technology can be realized by following the documents and exhibitions and acquiring theoretical and practical trainings.
- Experience and knowledge gained during the project implementation will continuously utilized at operation of plant and at planning of maintenance, and this knowledge will be transferred to other staffs.
- By sustainable implementation of experience and knowledge gained during the project implementation, and by sharing the docs and knowledge with other colleagues, and by following up.
- Purchasing more efficiently run equipment, and updating automation system and transferring to predictive maintenance are planned.

Q13: Do you think that what are the necessary steps and/or action to continue and expand the outcomes of the Project? Please describe your opinion.

- Qualified staff should be allocated at plants and importance should be given on training (of those staff)
- To attain sustainability all opportunities should be utilized. All project outputs will be shared with all staff.
- Implementation of experience and knowledge is a must for sustainability. With the technological development, this kind of project should be repeated periodically with short terms.
- A dynamic structure should be established and system should be updated continuously. Additionally, coal problem should be solved by Turkish Coal Enterprises (coal preparation plant should be established and should be washed before conveying it to us)

Q14: Are their any problems hampering the sustainability? Please describe the reasons. Also if you have any matters you want to discuss in this opportunity, please express your opinion included.

- I think that there is no hindrance for sustainability of the Project.
- Power plants should be controlled from in-situ place not from the centre. Importance should be given to nuclear energy and energy diversity.
- Lack of technological infrastructure which was discussed at technical seminars and training in Japan. These points should be taken into consideration.
- Ineffective, inefficient and economically dead equipment should be renewed, and problems generated due to coal should be solved.



No.1-3: Ex-trainees who participated in Training in Japan

Respondent: 6

1. Training Result & Utilization

Q1: How do you utilize the skill and knowledge acquired in the training?

Answer:

- With the knowledge and experience gained through the Project, appropriate curriculum for the training of technical staff at plants will be formed. This curriculum will be supported with current curriculum and will be named as “**Thermal Power Plant Training Curriculum**”. As we mentioned in action plan framework, this curriculum will be transferred to technical staff. (2)
- I am planning to make necessary analyses and to apply the solutions to run the plant more stable and efficiently. (2)
- I am planning to utilize the knowledge and experience at maintenance works at our plant, and share with other maintenance section staff.
- I am planning to share the knowledge/experience especially that I gained on excitation system, with other electricity maintenance engineers of EUAS
- I am planning to make necessary studies to utilize equipment more effectively and efficiently, and to plan to transfer predictive maintenance

Q2: After the training, have you shared already the skill and knowledge among other staffs of your organization?

Answer: Quite often to share the lesson learned with other staff 3(50%)
A few time to share the lesson learned with other staff 3(50%)
No chance to share the lesson learned with other staff 0(0%)

- A detailed presentation, with the documents received, about the training acquired in Japan is given to our presidency. Action plan submitted in Japan was discussed at our presidency. At the end of training, it is strong emphasized that the knowledge and experience gained was very important. (2)
- I have mostly shared the knowledge with the staff who work same department with me at bilateral discussions. I conveyed training text CD to engineers. (2)
- I have shared all documents (electricity + machine) which were distributed at trainings with my colleagues including engineers and workers working at my plant.
- I have shared with other maintenance section staff at OJT.
- I am sharing the information as much as I can with engineers at other plants.

2. Impacts of the Project

Q3: What are the main positive impacts of the training on your organization?

- Taking the problems we faced at power plants into account, most of these problems can be solved with the implementation of effective and sustainable training program with the knowledge and experience gained through the Project and technical visits in Japan. Since this is an important factor for increasing energy efficiency, it will be a positive contribution for our presidency. (2)
- It provided a strong motivation to have a more efficient plant with less unplanned stops. (In Japan, plants the energy cycle of which reaches 40~43% with 2-3 unplanned stops in a year give us nice examples to realize in our country) (2)
- Training we received provided us a direction. It will be a nice criterion while determining the road map. Prospective programs will be established more effectively under the lights of training acquired.
- I realized that huge importance is given to maintenance subject. Fresh staffs are trained 3-month period in Japan. With the transferring of knowledge and experience acquired through training, more effective and efficient maintenance will be realized, and thus cost and time loss will be diminished.
- It provided strong impacts on operation and maintenance logic.

3. Sustainability of the Project

No.1-5: JICA Experts

Respondent : JICA Experts 1 (as just compiling all the experts' opinion and ideas)

- * Five (5) Evaluation Criteria : 1 Relevance 2 Effectiveness 3 Efficiency 4 Impact
5 Sustainability 6 Others (Implementation Process)

Questions	Criteria
<p>1. Are there appropriate of selection of the "Orhaneli" as target group in the Project? オルハネリ発電所をプロジェクトの対象エリア〔グループ〕として選定したのは妥当であったとお考えですか？</p> <p>Due to the fact that approximately 15 years have passed since the Orhaneli power station was constructed, various problems with the boiler and other equipment have emerged making it an appropriate selection for the implementation of operation/maintenance technology transfer. There have been problems in studying efficiency improvement such as the failure to output the rated output and the lack of remaining data regarding efficiency when originally constructed.</p>	1
<p>2. Do you think that the Project design was appropriate according to the target groups' needs? (Project's approach and methodology) And please describe the reason below. 対象事業の選定（活動、技術移転や研修の方法やレベル・支援方法・アプローチ）は適切であったか？（例：現場ニーズにあったものか？研修コンセプトやアプローチは妥当であったかなど）</p> <p>The technology transfer recipients were divided between the Dept. of Education & IT (Ankara) and Thermal Power Dept. (Orhaneli power station), and since there were a large number of technology transfer items, these should have been slightly narrowed down to implement an intensive technology transfer, and we believe that would have made the project objectives more clearly defined. If the number of days of the technology transfer seminars had been reduced and the technical reports were created in Japan, sufficient time would have been spent working on-site to facilitate the technology transfer to the engineers.</p>	1
<p>3. Regarding to the C/Ps, do you think that their understanding of the project and their leading role & tangible function for the project was properly manner? 本プロジェクトに関するC/Pの理解や推進策は適切でしたか？（プロジェクト目標の理解、実施体制の確立、能力あるエンジニアの選定、専門家作業環境の確保ほか）</p> <p>The large number of technology transfer items and the long period of time spent performing on-site work tasks resulted in the experts having to provide repeated explanations regarding the objectives and procedures for the power plant before beginning each on-site work task in order for the C/Ps to fully understand their contents. Offices and seminar rooms were provided to the experts to use in their work, and all necessary equipment was made available so there were no problems in that regard.</p>	1
<p>4. Do you think that the Project duration/period was appropriate according to the necessary technical transfer and achieve the project purpose? (1) Better to concentration (1 year), (2) Better to concentration (1.5 year), (3)No needs to change, (4) Better to more longer period, (5) No idea 本プロジェクトの2年間という全工程は、次のどれに相当しますか？ (1) 集中化したほうが良い（1年間）、(2) 同左（1.5年）、(3) 現状が良い、(4) 長い方が良い、(5) わからない</p> <p>(3) No needs to change: Although two years was sufficient, the 10-month on-site work period was short in consideration of the amount of administrative tasks.</p>	1

<p>5. Do you think the Project was achieved the initiative objectives? Such as the relevance and contents of the Rehabilitation plan. Please describe the reason included.</p> <p>プロジェクト目標は達成できたと思われますか？【プロジェクト目標達成（「プロジェクト対象発電所（Orhaneli）におけるエネルギー効率改善能力が向上する」）の見込み：PDMの指標では、①Orhaneli発電所において、（プロジェクト対象外）同規模の発電所で外注により計画されたりハビリと比較し、同等かそれ以上のコストパフォーマンスのりハビリ計画の策定、②プロジェクトで作成された報告書、計画書、設計書、マニュアル等のEUAS 採用】</p> <p>We believe that the project objectives were achieved.</p> <p>(1) In comparison with the results of past construction projects, it is expected that an equal or better rehabilitation plan (excitation system replacement) has been designed.</p> <p>(2) The operation/maintenance manuals of the boilers and excitation system are scheduled to be translated into Turkish, and distributed to all EUAS power stations. In addition, steps are being taken to distribute copies of the rehabilitation outline design report and rehabilitation plan/outline design manual to all power stations.</p>	2
<p>6. What are the positive factors that encouraged the achievement of the Project purpose? And also what are the negative factors that inhibited the achievement of the Project purpose? Please describe the reason included.</p> <p>プロジェクトを推進（促進）あるいは貢献した要因があればお答えください。逆に阻害要因もあれば、その理由も含め、率直にお答えください。</p> <p>Rehabilitation of the boiler tubes at Orhaneli power station progressed beyond project planning so that a rehabilitation planning study to be done jointly with C/Ps was not able to be performed (the boiler tubes rehabilitation plan could not be integrated into the rehabilitation outline design report).</p>	2
<p>7. What kinds of issue were most influenced to the Project? Please state the reason, and explain how it was managed.</p> <p>プロジェクトに多大な影響を与える外部条件は発生しましたか？発生したとすれば、プロジェクトにどんな影響あるいは阻害となりましたか？ また、その変化に対するプロジェクトの対応はどうでしたか？</p> <p>None</p>	2
<p>8. Were there adequate in the numbers, level of cooperation, input timing and usage, etc in terms of the experts and local cost which has provided under the Project?</p> <p>プロジェクトの成果を達成するために、専門家派遣並びに予算といった投入の活用度、タイミング、量は適正であったと思いますか？（専門家の人数、派遣時期、派遣出張回数やプロジェクト予算など「資源の投入」について、その数やタイミングの適切性）</p> <p>Due to the large amount of technology transfer items and reports, expert manpower was insufficient and it was necessary to dispatch groups with expenses partially covered by Chugoku Electric Power. There was roughly two months between each on-site work task, making it difficult to sustain C/P motivation during those periods.</p>	3
<p>9. Were there adequate in the participating numbers, level of training, timing and duration in terms of the technology transfer seminar under the Project in order to achieve project outputs?</p> <p>プロジェクトの成果を達成するために、技術移転セミナーの量・質・タイミングは適切でしたか。（参加人数、内容、実施時期、期間などの適切性）</p> <p>Although originally the technology transfer seminars were planned to explain the technology transfer details from the project, technical lectures related to main power station equipment were added in the middle of the project at the request of EUAS. Preparation for these while in the midst of on-site work tasks resulted in a great deal of sudden, extra work. This resulted in reducing the opportunities for technology transfer to C/Ps through OJT during on-site work tasks.</p>	3

<p>10. How about the assignment of counterpart? Please describe in terms of the qualification, capacity, ability, experience and the attitude. C/P の配置、人数は適正でしたか？または、資質、能力や経験、あるいは姿勢等についてはいかがですか？</p> <p>There were variations in C/P ability and experience at Orhaneli power plant, but we think that this is an inevitable situation because just one or two persons are responsible for a single area. There were individual differences regarding the attitudes towards project measures.</p>	3
<p>11. Is there sufficient budget for the Project by the Turkey? 相手側の予算手当ては十分であったと思いますか？（プロジェクトの成果を達成するために、これまで支出されたトルコ側の予算の量・タイミングの適切性）</p> <p>None</p>	3
<p>12. Were there adequate in the participating numbers, level of training, timing and duration in terms of training in Japan under the Project? And, after the training in Japan, do you think it was fully utilized? Please state the training and evaluate the achievement of the training.</p> <p>本邦研修の量・質・タイミングは適切でしたか。（参加人数、内容、実施時期、期間の長さについて） また、本邦研修（C/P 研修）は、帰国後の活動に十分活かされていますか？</p> <p>Participating numbers: Adequate for the Thermal Power Dept., although participation of power station engineers from the Dept. of Education & IT was such that the essential objective of trainer education was partially lacking.</p> <p>Content: Considered adequate due to use of a needs survey conducted prior to initiating training.</p> <p>Implementation timing: Considered adequate as training was conducted between periods of on-site work tasks.</p> <p>Duration: Considered sufficient as technical lectures were provided for approximately three weeks.</p> <p>An action plan was created for C/P training in Japan which was implemented, including after returning to Turkey, with the support of experts, so we feel that C/P training in Japan was fully utilized</p>	3
<p>13. Were there adequate in the volume, quality and timing of formulation in terms of the Project "Products"(such as reports, plans, & manuals) in order to achieve project outputs? プロジェクトの成果を達成するために、成果品（各種技術マニュアル及び報告書）の量・質・作成タイミングは適切でしたか。</p> <p>The amount of technology transfer items and corresponding reports was too large. (Seven items and eight reports) In addition, since the reports during the on-site work task periods had to be provided in both Japanese and English, reports required a great deal of time to create, resulting in reduced opportunities for technology transfer at the Orhaneli power station.</p>	3
<p>14. Do you think the Project was properly managed such as held JCC? 合同調整委員会など、プロジェクト運営管理状況は適切であったと思われませんか？</p> <p>No particular problems.</p>	3
<p>15. Is there wide gap between the Project purpose and the Overall goal? Please state the impeding factors to prevent of the Overall goal achievement if any. 上位目標とプロジェクト目標との乖離は無かったか？プロジェクトの貢献度や、上位目標を達成するに当たっての阻害要因などもあれば、お答え下さい。</p> <p>Since there was insufficient data related to power station efficiency, required for reaching the overall goal, the actual efficiency of the Orhaneli power station cannot be evaluated.</p>	4

<p>16. What are the main positive impacts through the Project directly and indirectly? (Policy / Institutional, Technical, Economical, Cultural / Social Impacts, others) プロジェクトから生み出されたと思われる波及効果や間接的な効果があれば、お答え下さい（政策・組織的なインパクト始め、技術的、経済的、文化・社会的なインパクトなど）。 （例えば、本件実施により、トルコの電力セクター政策或いは他の発電所に何らかの影響を与えたと思われますか）</p> <p>Engineers from other power stations attended the technology transfer seminars resulting in the technology transfer contents of this project being diffused on a wider scale. The operation/maintenance manuals of the boilers and excitation system are scheduled to be translated into Turkish, and distributed to all EUAS power stations. In addition, steps will be taken to distribute copies of the rehabilitation outline design report and rehabilitation plan/outline design manual to all power stations.</p>	4
<p>17. (Organizational/Policy aspect) What will be the future direction and continuity of the Project outcomes? Is there any expectation to possible change? 事業の持続性？（特に、今後の事業展開、例えば研修事業の継続、人材の継続・確保、リハビリ実施の可能性について、お感じになられる事をお答え下さい）</p> <p>Dept. of Education & IT: An EUAS training program will be created based on the training improvement plan and action plan created jointly with the experts. Thermal Power Dept.: The operation/maintenance manuals of the boilers and excitation system created during this project will be used by EUAS. Orhaneli power station: The rehabilitation outline design was studied jointly with the experts and the excitation system will be replaced. Management of the boiler tube wall thickness will be implemented in a systematic manner. The know-how about rehabilitation outline design study that JICA expert lectured to the engineer would be disseminated to another Orhaneli staffs through the seminar held by the engineer.</p>	5
<p>18. (Technical aspect) (1) Judging from the skill and stability of the current counterpart staff, will the Turkish organization be able to continuously strengthen its institutional activities and take a leading role of energy efficiency, even after the Project? (2) Do you think the possibility to extend the techniques and know-how which has been accumulated through the Project? 【1】 C/P の技術・ノウハウの定着度はどうですか？（個別技術、研修計画や実施能力、研修手法など各部署の任務で継続性）</p> <p>In regards to training program creation, the Dept. of Education & IT is being encouraged to utilize the contents on the C/P training in Japan. In regards to boiler operation/maintenance, management of the boiler tube wall thickness, for which technical guidance was provided, is to be implemented in a systematic manner. The excitation system is to be replaced based on the contents and procedures of the rehabilitation outline design report.</p> <p>【2】 プロジェクトを通して培われた技術・ノウハウは他地域へも普及していく可能性はありますか？ Engineers from other power stations participated in the technology transfer seminars and the lecture material has been distributed in the form of electronic data so that the lecture contents can be diffused to other power stations. Operation/maintenance manuals are being translated into Turkish by EUAS to be distributed to all power stations so that the technical knowledge is expected to be diffused. The distribution to all power stations of completed technical reports related to rehabilitation will be requested.</p>	5
<p>19. (Financial aspect) Judging from the viewpoints of current and future financial conditions of counterpart organization, will the Turkish organization be able to continuously provide necessary financial sources, even after the Project? C/P 機関の財務的持続性の確保（事業運営に係る財源やリハビリ実施予算の確保）の可能性につき、お考えをお答え下さい。</p> <p>None</p>	5

<p>20. Are there smooth communication between counterparts and Japanese experts? Do you discuss the matter to be solved and the Project planning and the determination? コミュニケーションの状況は良好でしたか？特に、問題への対処、事業の計画、決定は共同で行われましたか？</p> <p>Studies/Investigation for manuals and other technical reports were generally carried out jointly with Orhaneli power station engineers, and we feel that communication was smooth and satisfactory.</p>	6
<p>21. Please feel free to give comments on the Project, issues and lessons related to the Project, or the remaining problems that you felt. Please state your own opinion. 残されたプロジェクト期間での活動及び課題について、ご自由にご意見や提案があれば、お書きください。</p> <p>We would like to provide support for the implementation of the action plan created during C/P training in Japan. We would like to offer complete support for the creation of an action plan directed at the independent actions of a post-Project EUAS that will contribute to the continuous development of EUAS.</p>	6
<p>22. If you have any matters you want to discuss in this opportunity, please express your opinion included. その他、プロジェクトに関する事で、大きな変化など気づかれた点、全体評価、留意事項、教訓等ご意見ございましたら、どうかご記入ください。</p> <p>None</p>	6