RCREEE
Regional Center for Renewable Energy and Energy Efficiency
المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة

وزارة الكهرباء والطاقة

"Certified Energy Management Professional" first Pilot in Egypt

Cairo-Egypt - Venue: RCREEE Premises

Agenda

Date	Time		Module	
Day 1	8:00	8:30	**Registration and Introduction**	
	8:30	9:00	**Opening Remarks**	
			1	**ENERGY MANAGEMENT**
	8:30	9:30	1.1	Fundamentals of Energy
			1.1.1	Sources and Energy Conversion
			1.1.2	Sustainability Issues
			1.1.3	Economics
			1.1.4	Importance of Energy Management
	9:30	10:00	1.2	Drivers for Energy Management
			1.2.1	Operational
			1.2.2	Compliance
			1.2.3	Competitiveness
	10:00	10:30	1.3	Energy Management Barriers
			1.3.1	Awareness
			1.3.2	Technical Capacity
			1.3.3	Financial
			1.3.4	Legal / Regulatory
	10:45	11:30	1.4	Energy Management Systems (50001)
			1.4.1	Structure
			1.4.2	Roles and Responsibilities
			1.4.3	Implementation Approaches
	11:30	12:30	1.5	Energy Management Strategies
			1.5.1	Common Interventions
			1.5.2	Low Cost / Now Cost Approaches
	13:15	15:15	1.6	Measurement and Verification of Energy Savings
			1.6.1	Fundamentals
			1.6.2	M&V Frameworks and Options
			1.6.3	Baseline Development
			1.6.4	Baseline Adjustments
			1.6.5	Tracking Savings
			1.6.6	M&V Statistics
	15:30	16:30	**2**	**REGIONAL/NATIONAL POLICY, LEGAL AND REGULATORY FRAMEWORK**
			2.1	Regional Initiatives
			2.2	Egypt - EE Policy
			2.3	Egypt - EE Insittutional Arrangements

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			2.4	Egypt - EE Laws and Regulations
	16:30	17:00	**REVIEW**	
Day 2	**08:00**	**11:00**	**3**	**ENERGY AUDITING**
	08:00	8:15	3.1	Energy Audit Process Overview (ISO 50002)
	08:15	0830	3.2	Types and Uses of Energy Audits
	0830	0930	3.3	Energy Audit Steps
			3.3.1	Customer Engagements (Step 1)
			3.3.2	Audit Initiation (Step 2)
			3.3.3	Data Collection Initiation (Step 3)
			3.3.4	Measurement Planning (Step 4)
			3.3.5	Conducting the Site Visit (Step 5)
			3.3.6	Analysis (Step 6)
			3.3.7	Energy Audit Reporting (Step 7)
			3.3.8	Closing Meeting (Step 8)
	0930	1000	3.4	Energy Analysis Techniques
	1015	1030	3.6	Project Packaging
	1030	1100	3.7	Reporting
			4	**DEMAND SIDE LOAD MANAGEMENT AND ENERGY EFFICIENCY**
	1100	1115	4.1	Utility Investment Rationale, Decision Logic, Evaluation Cycle
	1115	1130	4.2	Incentive design
	1130	1145	4.3	Demand Response Technologies
	1145	1200	4.4	Leveraging DSM Incentives to Fund Energy Efficiency Projects
			5	**BUILDING ENERGY Systems ANALYSIS**
	1300	1600	5.1	Built Environment
			5.1.1	Energy Flows in the Built Environment
			5.1.2	Thermal Envelope
			5.1.3	Passive Design Strategies
			5.1.4	Building Codes
	1630	1700	**REVIEW**	
Day 3	**800**	**1100**	**5**	**BUILDING ENERGY Systems ANALYSIS (cont')**
	800	1100	5.2	Energy Systems
			5.2.1	Electrical
			5.2.2	Thermal
			5.2.3	HVAC
			5.2.4	Co-Generation Technologies
	1100	**1200**	**6**	**SPECIAL CONSIDERATIONS FOR COMMERCIAL AND INSTITUTIONAL BUILDINGS ANALYSIS**
	1100	1130	6.1	Special Considerations by Facility Types
			6.1.1	Hospitals
			6.1.2	Correctional Facilities
			6.1.3	Higher Education

			6.1.4	Military Installations
			6.1.5	Hospitality
			6.1.6	Fitness Centers
	1130	1200	6.2	Institutional Facility Services
			6.2.1	Laundry
			6.2.2	Dining and Food Services
			6.2.3	Surgical Centers
			6.2.4	Medical Imaging
			6.2.5	Laboratories
			6.2.6	Pools
	1300	**1630**	**7**	**INDUSTRIAL FACILITIES**
	1300	1330	7.1	Drivers for Industrial Energy Efficiency
			7.1.1	Utility Cost Savings
			7.1.2	Quality Assurance and Production Reliability
			7.1.3	Environmental Protection
			7.1.4	Workplace Safety
	1330	1400	7.2	Industrial Benchmarking
			7.2.1	Best Available Practice Technologies
			7.2.2	Challenges
			7.2.3	Techniques for Benchmarking
	1400	1630	7.3	Common Measures
			7.3.1	Motors
			7.3.2	Compressed Air
			7.3.3	Thermal Plants
			7.3.4	Thermal Fluid Supply
			7.3.5	HVAC
			7.3.6	Heat Recovery
	1630	**1700**	**REVIEW**	
Day 4	800	900	7.4	Facility Specific Opportunities
			7.4.1	Waste Water Treatment
			7.4.3	Textile Mills
			7.4.4	Metals
			7.4.5	Cement Manufacturing
	900	**1000**	**8**	**RENEWABLE ENERGY SYSTEMS**
	0900	0915	8.1	Renewable Energy Systems Planning
	0915	0930	8.2	Project Development and Integration
	0930	1000	8.3	Renewable Energy Technologies
			8.4.1	Solar Energy
			8.4.2	Wind Energy
			8.4.3	Hydroelectric
			8.4.4	Tidal Energy

			8.4.5	Heat Pumps
	1000	**1630**	**9**	**ENERGY EFFICIENCY PROJECT FINANCIAL ANALYSIS**
	1000	1400	9.1	Financing Energy Efficiency
			9.1.1	Market Development and Stages of Maturity
			9.1.2	Sources of Funding
			9.1.3	Developing the Project Pipeline
			9.1.4	Funding Arrangements
	1400	1630	9.2	Fundamentals of Project Financial Modeling
			9.2.1	Life Cycle Cost Analysis
			9.2.2	Performance Metrics
			9.2.3	Risk Analysis
	1630	**1700**	**REVIEW**	
Day 05	**0800**	**1000**	**10**	**TOOLS FOR ENERGY AUDITING AND ENERGY MANAGEMENT**
	0800	0900	10.1	Energy Auditing
			10.1.1	Software
			10.1.2	Toolkits and Guides
			10.1.3	Measurement Equipment and Data Logging
	0900	1015	10.2	Energy Management
			10.2.1	Enterprise Resource Planning System Integration
			10.2.2	Software
			10.2.3	Sub-Metering
			10.2.4	Outsourcing Strategies
	1030 **1300**	**1130** **1600**	**REVIEW (Day and Final)** **CEMP EXAM**	