Independent mid-term review

IRAN

Industrial Energy Efficiency in Key Sectors in Iran

UNIDO Project Number: GF/IRA/12/001
UNIDO SAP ID: 120506
GEF Project Number: 3540

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna, 2015

Distr. GENERAL

ODG/EVA/15/R.40

April 2015

Original: ENGLISH

This mid-term review was managed by the responsible UNIDO project manager with quality assurance by the UNIDO Office for Independent Evaluation

This report has been prepared for UNIDO for the Mid-term Review of the UNIDO GEF Project "Industrial Energy Efficiency in Key Sectors in Iran"

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ACKNOWLEDGEMENT

The Evaluation Team would like to acknowledge the many and diverse contributions made to this evaluation report. We are particularly thankful to staff of UNIDO at the Headquarters and in the field, to officers and staff from government agencies in the Islamic Republic of Iran visited during the evaluation mission.

Contents

Abbreviations and acronyms

ACIE	Association of Cement Industry Employers
BAT	Best Available Techniques
BREF	BAT Reference Document
CO_2	Carbon Dioxide
DoE	Department of Environment
EMS (EnMS)	Energy Management System
ENE	Energy Branch
EE	Energy Efficiency
EIA	Environmental Impact Assessment
ERP	Enterprise Resource Planning System
ESCO	Energy Service Company Fund
EST	Energy Savings Targets
ET	Evaluation Team
EVA	UNIDO Office for Independent Evaluation
EU	European Union
FP	Focal Point
GDP	Gross Domestic Product
GEB	Global Environmental Benefit
GEF	Global Environment Facility
GHG	Greenhouse Gases
IEE	Industrial Energy Efficiency
IFCO	Iranian Fuel Conservation Company
IMIDRO	Iranian Mines & Mining Industries Development and Renovation Organisation
ISO	International Standards Organization
KPI	Key Performance Indicator
LoA	Letter of Agreement
MFA	Ministry of Foreign Affairs
M&E	Monitoring and Evaluation
M&T	Energy Management, Monitoring and Targeting

M&V	Measurement and Verification
MoO	Ministry of Oil
MoITC	Ministry of Information, Technology and Communication
MoEP (MoE)	Ministry of Electrical Power (Ministry of Energy)
MoU	Memorandum of Understanding
MTR	Mid-Term Review
NGO	Non-Governmental Organization
NPC	National Petrochemical Company
NIORDC	National Iranian Oil Refining and Distribution Company
NIOC	National Iranian Oil Company
NPM	National Project Manager
O&M	Operation and Maintenance
ODG/EVA	Office of the Director General / UNIDO Office for Independent Evaluation
PAA	Project Administrative Assistant
PC	Project Component
PD	Project Document
PIF	Project Identification Form
PIR	Project Implementation Review
PM	Project Manager
PMIS	GEF Project Management Information System
PMT	Project Management Team
PMU	Project Management Unit
PPG	Project Preparation Grant
PSC	Project Steering Committee
QAE	Quality at Entry
RBM	Results Based Management
RE	Renewable Energy
SABA (IEEO)	Iran Energy Efficiency Organization
SEC	Specific Energy Consumption
SMEs	Small and Medium Enterprises
SO	System Optimization
TOC	Theory of Change

ToR	Terms of Reference
ToT	Training of Trainers
UNDAF	United Nations Development Assistance Framework
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
VA	Voluntary Agreements
VSDs	Variable Speed Drivers
WTA	Walk-Through Energy Audits
WB	World Bank

Glossary of evaluation-related terms

Term	Definition
Baseline	The situation, prior to an intervention, against which progress can be assessed.
Effect	Intended or unintended change due directly or indirectly to an intervention.
Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved.
Efficiency	A measure of how economically resources/ inputs (funds, expertise, time, etc.) are converted to results.
Impact	Positive and negative, intended and non-intended, directly and indirectly, long term effects produced by a development intervention.
Indicator	Quantitative or qualitative factors that provide a means to measure the changes caused by an intervention.
Intervention	An external action to assist a national effort to achieve specific development goals.
Lessons learned	Generalizations based on evaluation experiences that abstract from the specific circumstances to broader situations.
Logframe (logical framework approach)	Management tool used to facilitate the planning, implementation and evaluation of an intervention. It involves identifying strategic elements (activities, outputs, outcome, and impact) and their causal relationships, indicators, and assumptions that may affect success or failure. Based on RBM (results based management) principles.
Outcomes	The likely or achieved (short-term and/or medium/term) effects of an intervention's outputs.
Outputs	The products, capital goods and services which result from an intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.
Relevance	The extent to which the objectives of an intervention are consistent with the beneficiaries' requirements, country needs global priorities and partner's and donor's policies.
Risks	Factors, normally outside the scope of an intervention, which may affect the achievement of an intervention's objectives.
Sustainability	The continuation of benefits from an intervention, after the development assistance has been completed
Target groups	The specific individuals or organizations for whose benefit an intervention is undertaken.

Executive summary

This report presents the findings of the Mid-Term Review (MTR) of the project "Industrial Energy Efficiency in Key Sectors in Iran" (herein referred to as "Project"), implemented by the United Nations Industrial Development Organization (UNIDO) with financing grant provided by the Global Environment Facility (GEF).

An evaluation team of two experts, international evaluation consultant Ms. Iva Bernhardt, and national evaluation consultant Mr. Farhad Arabpour conducted the Mid-Term Review in the period of February 2015 to April 2015. The evaluation included interviews at UNIDO HQ in Vienna and in the Islamic Republic of Iran. The evaluation field mission included visits to two of the eight sites where the EnMS implementation is taking place, namely field visits to the Regal Petrochemical Co. and Oxin Steel company, and to the and visit to two of the four companies where there is direct support to industry for industrial energy efficiency projects from the GEF Grant, namely: Esfahan Steel Company (ESCO) and Ati Morvarid Pardis from the Bricks sector.

The overall project objective is to promote energy efficiency in five high energy consuming industrial sectors: Iron & Steel, Petrochemicals, Refinery, Brick and Cement by adopting a national framework for Energy Management Standards (EnMS).

The objective of the MTR is to assess whether the project has achieved or is likely to promote energy efficiency in five high energy consuming industrial sectors: Iron & Steel, Petrochemicals, Refinery, Brick and Cement by adopting a national framework for Energy Management Standards (EnMS).

The evaluation covers the period from October 2012 to February 2015. As of today, the project is expected to end in July 2017.

Key Findings

Design. Generally, the project design is weak, as it was done with only partly participation of local stakeholders in project identification. Due to the fact that some of the comments of local stakeholders were not considered during project design, the Project Results Framework and target indicators were not well and adequately developed, primarily due to the missing realistic baseline for energy efficiency in Iran for some outputs. Therefore, a new baseline has to be set where necessary, and based on this baseline, new feasible and realistic outputs and target indicators for the project in the Project Results Framework ought to be set. The new Project Results Framework has to be approved by the Project Steering Committee (PSC) in close consultation with the GEF Coordination Unit and UNIDO Office for Independent Evaluation.

Relevance. Based on the assessment of project relevance to local and national energy priorities, policies and strategy of the Government of the Islamic Republic of Iran, to GEF's strategic priorities and objectives, and to the GEF focal area of climate change and Strategic Program CC 2 – Industrial Energy Efficiency in Key Sectors, and to UNIDO's mandate, the

overall project relevance is considered to be highly satisfactory and the project as such is highly relevant for all mentioned stakeholders.

Effectiveness. The project was effective at time of the mid-term review in the light of successful project implementation course to date, and the tangible results of delivered planned activities/inputs. Main outputs achieved by the time of the MTR are: implementation of the EnMS at eight companies, five demonstration projects for the direct support to industry of industrial energy efficiency projects are under implementation, diverse training on industrial energy efficiency are done, and energy audits have been performed. Yet it was difficult to assess some of the outputs, as the baseline and the outputs themselves will be changed to suit the veritable baseline for this project. Therefore, setting a new Project Results Framework with feasible outputs and target indicators to be reached within the timeline of the project and are based on a realistic baseline, as well as preparation of a new Work Plan based on the new Project Results Framework is essential for the further course of project implementation, and successful and effective implementation of this project.

Efficiency. The mid-term review has concluded that all efforts were undertaken to ensure cost-effectiveness of project results both by UNIDO as IA, PMT and the national project counterpart IFCO. However, there is a need to calculate as soon as possible the contribution of IFCO and industries for the cash and in-kind co-financing to date using the new feasible indicators from the new Project Results Framework.

Sustainability. The overall sustainability rating for this Project at the time of the mid-term review is likely, which means that there are no risks that affect the dimension of project sustainability. No financial, socio-political, institutional framework and governance, and environmental (ecological) risks are known.

M&E. Taken into consideration the fact that there was no proper baseline set for the project, together with the existing project results framework that contains many unfeasible outputs and indicators, the implementation of M&E and use for adaptive management is on a moderately satisfactory level using the project results framework as it stands. In order to meet the minimum GEF requirements for M&E, first of all a new real-time baseline has to be set, followed by an adapted project results framework with feasible outputs and indicators at output level, as well as an adapted work plan has to be elaborated leaning on the new project results framework as soon as possible.

Project management has been highly successfully carried out by the UNIDO Project Manager and Project Management Team (PMT) led by the National Project Coordinator (NPC) in the Islamic Republic of Iran.

Key Conclusions

The Project is well on track with a highly satisfactory progress to promote energy efficiency in five high energy consuming industrial sectors: Iron & Steel, Petrochemicals, Refinery, Brick and Cement industries in the Islamic Republic of Iran by adopting a national framework for Energy Management Standards (EnMS). This project is an example for successful project implementation by being a major pioneer in promoting industrial energy efficiency with such

broad scope at once in the Islamic Republic of Iran. The fact that the Energy Management Systems (EnMS) is being successfully implemented in eight companies within the four largest energy intense industries in Iran: Iron & Steel, Petrochemicals, Refinery and Cement industries, and five other demonstration projects with three larger, and two smaller scale industrial energy efficiency projects will be supported by direct subsidies from the GEF Grant within this project shows the large opportunity to tackle the subject of industrial energy efficiency in Iran to contribute to long-term changes for energy savings and conservation and reaching the goals of CO2 and GHG reduction.

The four GEF key strategic indicators for this project were: cumulative energy saved, cumulative CO2 emissions (and therewith automatically GHG reduced) avoided, energy savings in USD (at international prices) and million of USD of EE technology investments. Project implementation for reaching all of these four indicators have been started during the realization of the Action Plans deriving from the implementation of the EnMS and their measurement will be enhanced in the implementation continuation of the project.

It might happen that the project implementation is likely to take longer than planned, mainly due to UN Sanctions regulations. For the time being it is unlikely to foresee if a project extension will be needed, but it should be noted that this mid-term review will support a project extension due to the reasons mentioned above.

The original project design included many unrealistic and overly optimistic targets based on a weak baseline, and the project document including the project results framework need to be amended. The management has displayed flexibility and project design amendments is likely to result in a good cohesive project. The project “Industrial Energy Efficiency in Key Sectors in Iran” offers a clear added value for the industry, for the country to reach GEBs (Global Environmental Benefits) and has a great potential for replicability.

The project is fully relevant to UNIDO by promoting green and clean energy efficient technologies, and to the national energy priorities, policies and strategy of the Government of the Islamic Republic of Iran, as well as to the GEF focal area of climate change and SP-2 - Promoting energy efficiency in the industrial sector.

Key Recommendations

Based on the evaluation and findings of this report, the evaluation team prepared several recommendations that can contribute to the achievement of the Project outcomes and outputs and the overall project objective to promote energy efficiency in five high energy consuming industrial sectors: Iron & Steel, Petrochemicals, Refinery, Brick and Cement) by adopting a national framework for Energy Management Standards (EnMS) in the Islamic Republic of Iran. The recommendation will be separated according to the designees into: General recommendations, Recommendations to the Iranian Fuel Conservation Company (IFCO) and Project Management Team (PMT) and Recommendations to UNIDO.

General Recommendations

1. A realistic Baseline for the outcomes, outputs and targets needs to be set for the purpose of this in the Islamic Republic of Iran where this was not the case with the present Baseline indicators.
2. The Project Results Framework (Outcomes, outputs and / or indicators) should be changed and adapted with feasible indicators that would match the present baseline situation for the subject of Industrial Energy Efficiency in the Islamic Republic of Iran.
3. Especially due to the difficulties with the UN Sanctions Committee, project extension can be considered, if it would be required and feasible.
4. UNIDO and IFCO should create a network between the EnMS pilot companies in order to share best practices between them and therewith ensure the sustainability and replication of the project.
5. Promote Government to Government transfer of knowledge on EE policies and legislative.
6. Sharing of best practices, case studies experiences and exchanging of Action Plans for Energy Efficiency and for implementing the EnMS system with other countries. Focus on training on benchmarking through aligning the companies on UNIDO's benchmarking methodologies, rather than producing only benchmarking reports.
7. Larger spectrum of stakeholders; industries, policy makers, financial institution, sector association, SABA, etc. should be integrated in the project in order to make mutual use of the data present at the project stakeholders' in order to gain applicable and effective outcomes.
8. Dissemination of project achievements and success and EE information in a form of short movie and / or brochures to a broad public in Iran.

Recommendations to UNIDO

1. UNIDO should initiate a Training of Trainers (ToT) training on benchmarking and energy audit with IFCO.
2. UNIDO should initiate Training of Trainers (ToT) workshop together with SABA (maybe at their training center in Tabriz) with international experts for metering and M&T instead of buying the metering equipment which already exist (Project component 4).
3. Concerning the approval of the UN Sanctions Committee, UNIDO should enable the following steps:
    i. Arbitrate a direct partner in the Technical UN Sanctions Committee with whom the Project Managers at UNIDO can communicate directly in order to facilitate avoiding of communication gaps and simplify process of receiving the approval of UN Sanction Committee for procuring of equipment.
    ii. Couple with IAEA on their own experience in approving the Projects / Equipment sent to Iran.
    iii. Engage the UNIDO New York Office if feasible to facilitate and speed-up the process of obtaining the approval of the UN Sanctions Committee once the whole technical documentation has been sent to the UN Sanctions Committee.

iv. Establish a platform for collaboration between the Project Managers dealing with projects in countries with UN sanctions for sharing experiences and best practices with the ultimate goal being to speed-up the obtaining of the approval of the UN Sanctions Committee for procuring equipment for the Islamic Republic of Iran.

Recommendations to the Government of the Islamic Republic Iran represented through the Executing Partner Iranian Fuel Conservation Company (IFCO) and PMT:

1. IFCO should receive industry's and bank's feedbacks on EE financial scheme for the EE Revolving fund.
2. IFCO should organize a workshop and invite industries/ banks to collect their ideas on the EE Revolving fund.
3. IFCO should match the outcomes and outputs of their three projects calculated as cash co-financing to the outcomes and outputs of the Project Logical Framework.
4. IFCO should report specific information on the in-kind co-financing to the Project Steering Committee (PSC).

Main Lessons learned

Within this project, best practice was the introduction of the Basecamp as a communication and knowledge sharing platform for the large network of National and International project experts for the impelementation of Energy Managment System (EnMS).

The involvement of stakeholders from the inception phase and conducting due diligence of project stakeholders during the project initiation is utmost important, especially in order to understand the needs of the project developers, stakeholders and beneficiaries, and to ensure and create a strong sense of ownership of the project as key to successful project implementation.

Timely integration of comments and recommendations of all project stakeholders is crucial for setting a veritable project baseline, based on what realistic Project Document with Project Results Framework with feasible outputs, outcomes and targets can be set.

Clear streamlined processes with detailed instructions for approval of projects and/or project component by the UN Sanctions Committee are necessary for flawless project implementation in countries affected by UN Sanctions.

1. Country and Project Background

1.1. Country background

1.1.1. Iran development context

The Islamic Republic of Iran is a middle-income country (MIC), with a per-capita GDP of US$10,783 (adjusted for PPP in 2005) in 2008. It has made good progress in social and human development and is on track to achieve most of the Millennium Development Goals (MDGs) including MDG1 (Reduce extreme poverty).

The country‘s human development indicators have substantially improved during the past 30 years.

During the past 20 years, Iran’s annual growth in its HDI has been over double the global average. This would seem to imply that – from a human development standpoint – during the period 1980-2012, Iran’s policy interventions were both significant and appropriate to enable improvements in human development.

1.2. Economical overview

The economy of Iran is a mixed and transition economy with a large public sector. Some 60% of the economy is centrally planned. It is dominated by oil and natural gas production, although over 40 industries are directly involved in the Tehran Stock Exchange, one of the best performing exchanges in the world over the past decade. With 10% of the world's proven oil reserves and 15% of its natural gas reserves, Iran is considered an "energy superpower". It is the world's eighteenth largest by purchasing power parity (PPP) and thirty-second by nominal gross domestic product.

Due to its relative isolation from global financial markets, Iran was initially able to avoid recession in the aftermath of the 2008 global financial crisis. Yet, following increasingly stringent sanctions imposed by the international community as a result of the country's nuclear program, oil exports fell by half.

1.3. Policy and legal framework for Energy in Iran

1.3.1. Energy consumption and energy efficiency in Iran

Although the capital resources achieved through selling forms of energy have a high income potential for the countries which are rich of natural resources like oil and natural gas in abundance as Iran, neglecting the efficient utilization of the forms of energy has caused them to lose the derived opportunities easily. Industrialization process and economic development in such countries have added a lot of new industrial and service divisions to the consumers of energy. On the other hand, considering the population growth and remarkable energy consumption increase, have made Iran to implement some policies in order to prevent the

irregular and non-optimum use of energy, decrease the costs of production and promotion of the social welfare which are known as “energy efficiency policies”.

According to the Vice-president of Strategic Planning and Supervision, the average annual growth of energy consumption is equal to 6% which and if this continues, by 2025 the consumed energy in the country would increase up to 3,752,000,000 barrels of crude oil.

In order to reach a desirable condition in 2025 vision - a strategy for long-term sustainable growth- , it is necessary to decrease the share of consumption divisions extremely through suitable and practical methods, so that a maximum value added can be achieved from the sources of energy in the country. The attention paid to the fourth and fifth plans of economic, social and cultural development by the legislature in the Islamic Republic of Iran and the emphasis in realization of one third of gross domestic production through efficiency, developing outspread activities aiming to decrease the costs and increase the compatibility, pervasive discussions about the necessity of applying energy efficiency which was specially empowered after subsidy reform plan, software and knowledge movements, realization of article 44 and other articles of the constitution and pervasion of financial crisis throughout the world, compulsory sanctions and the importance of resistive economy, all made Iran to see the efficiency in a different way. According to the statistics of the past fifty years, the slope of efficiency curve of the country does not show the slightest increase. As the first step toward major objectives of national efficiency movement, it is necessary to consider efficiency as the main pillar of development strategy of the country.

In 2013, Energy intensity in Iran has been 1.5 times more than global average, 3.03 times more than UK, 2.6 times more than Turkey and 2.46 times more than Japan. More details on the energy intensity indicator, energy efficiency and energy consumption for Iran are presented on the figures 1 to 6 below:

Figure 1: Energy intensity indicator in different countries in 2013

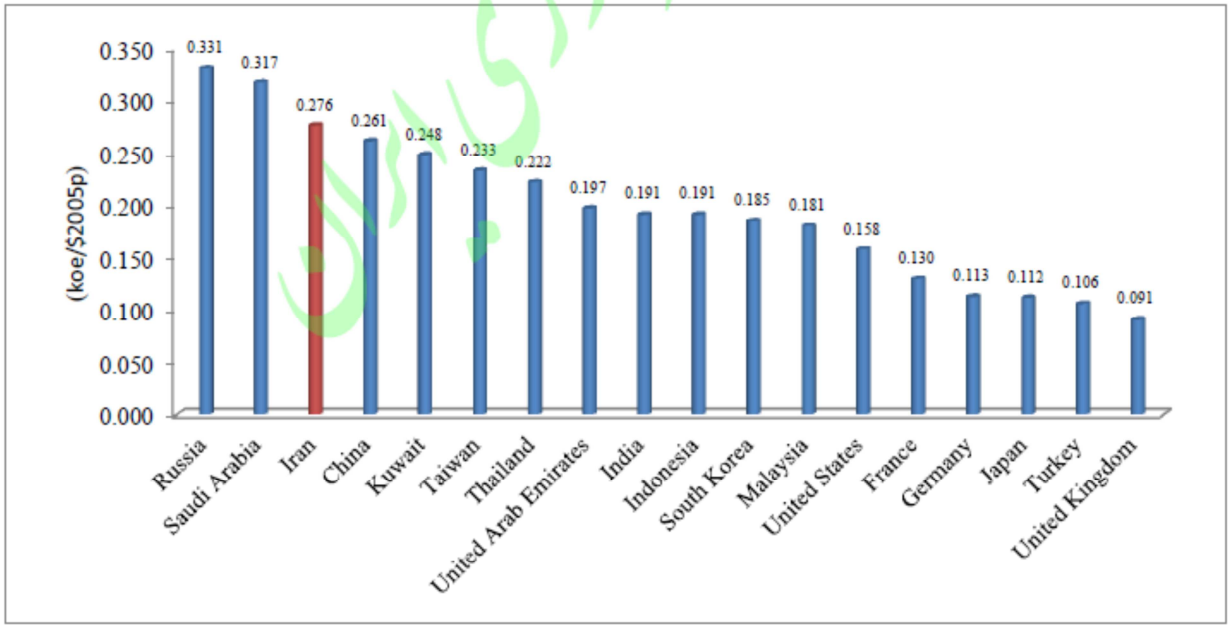


Figure 2: Energy Efficiency indicator in Iran (2000-2013)

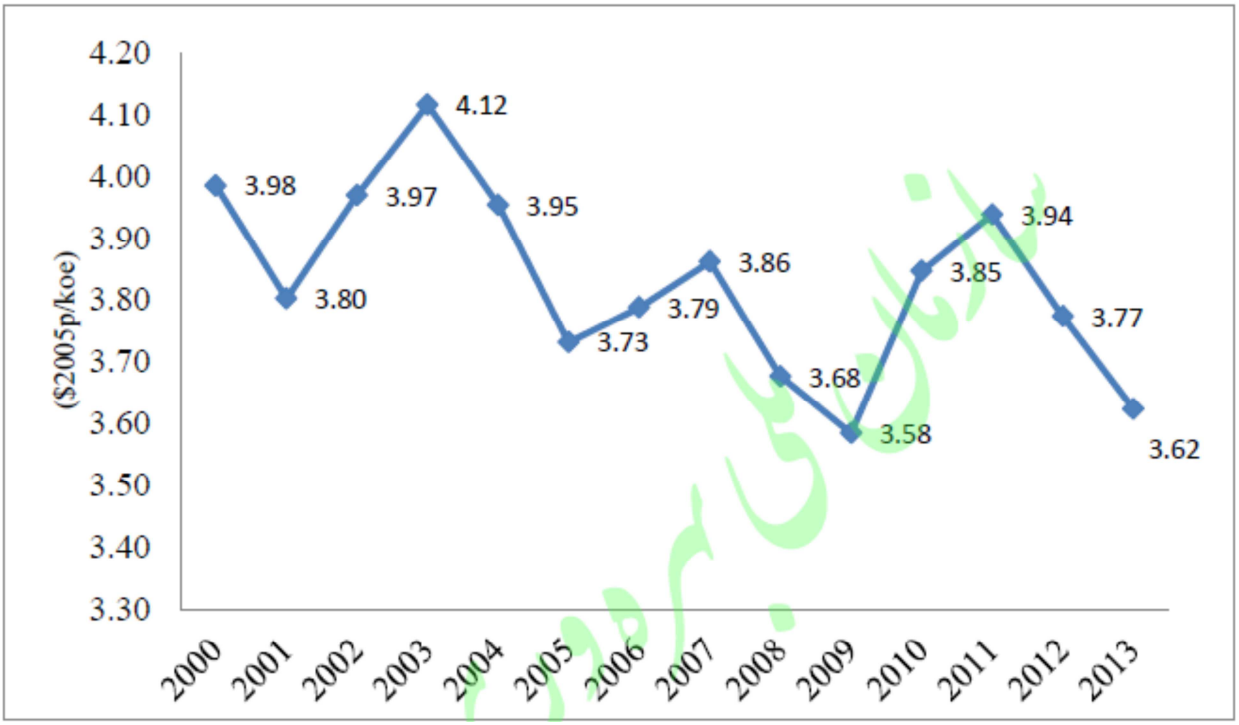


Figure 3: Energy Efficiency indicator in different countries (2013)

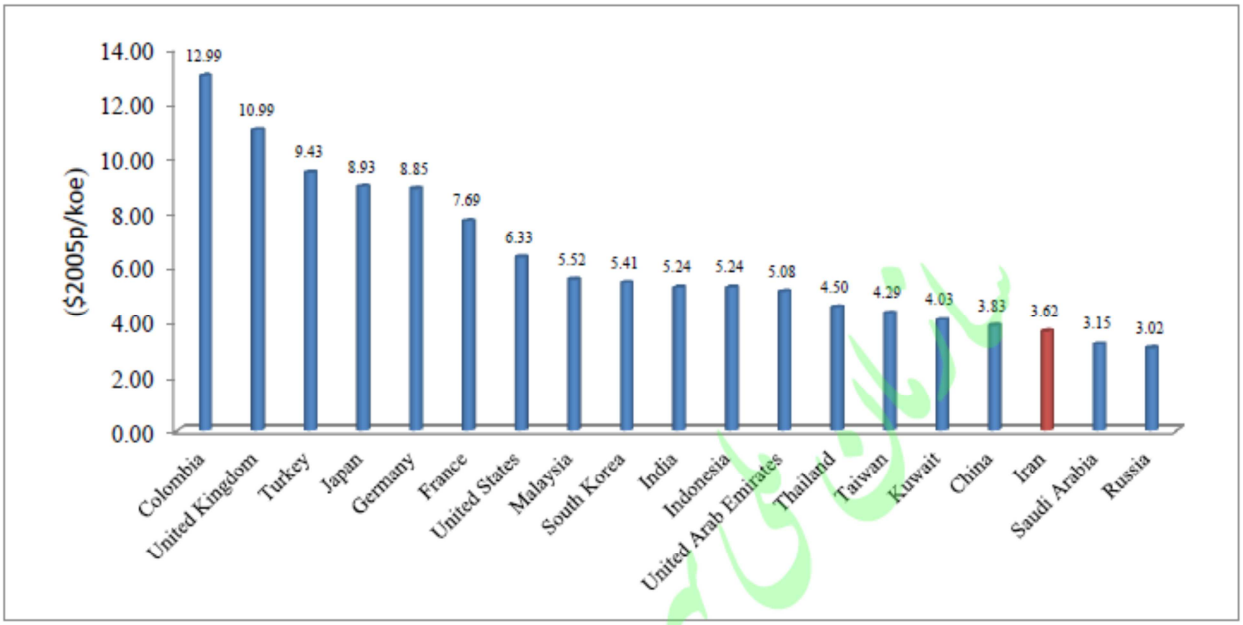


Figure 4: Energy consumption in Iran to 2021

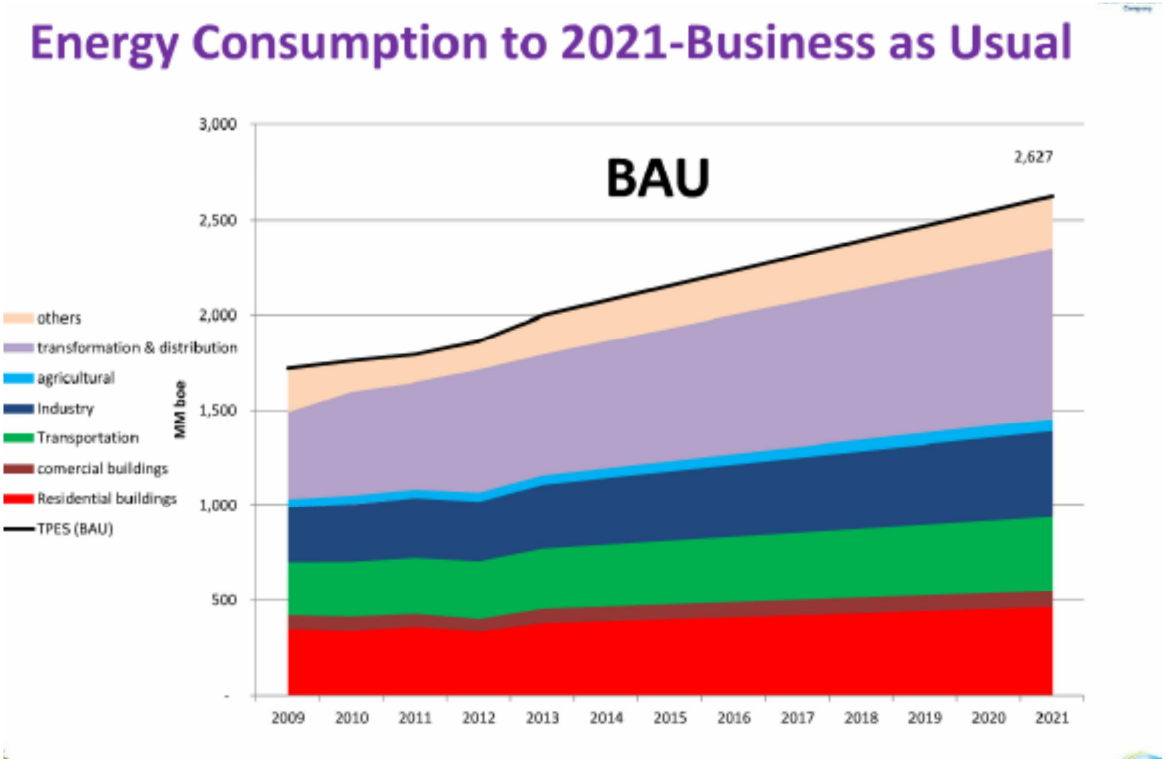


Figure 5: Energy consumption in Iran from 2010 to 2021 in all sectors

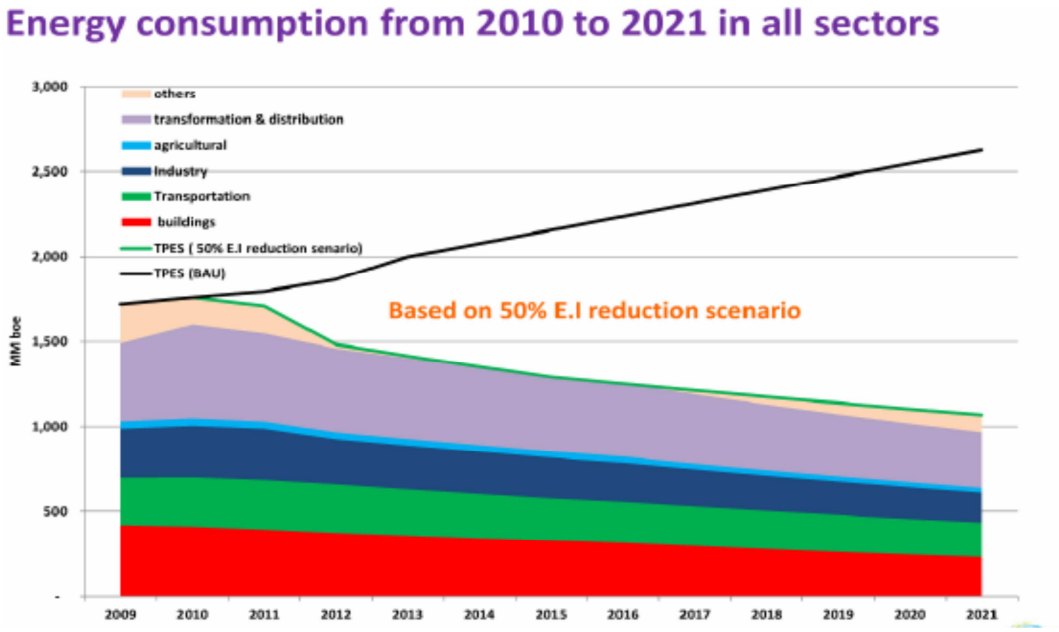
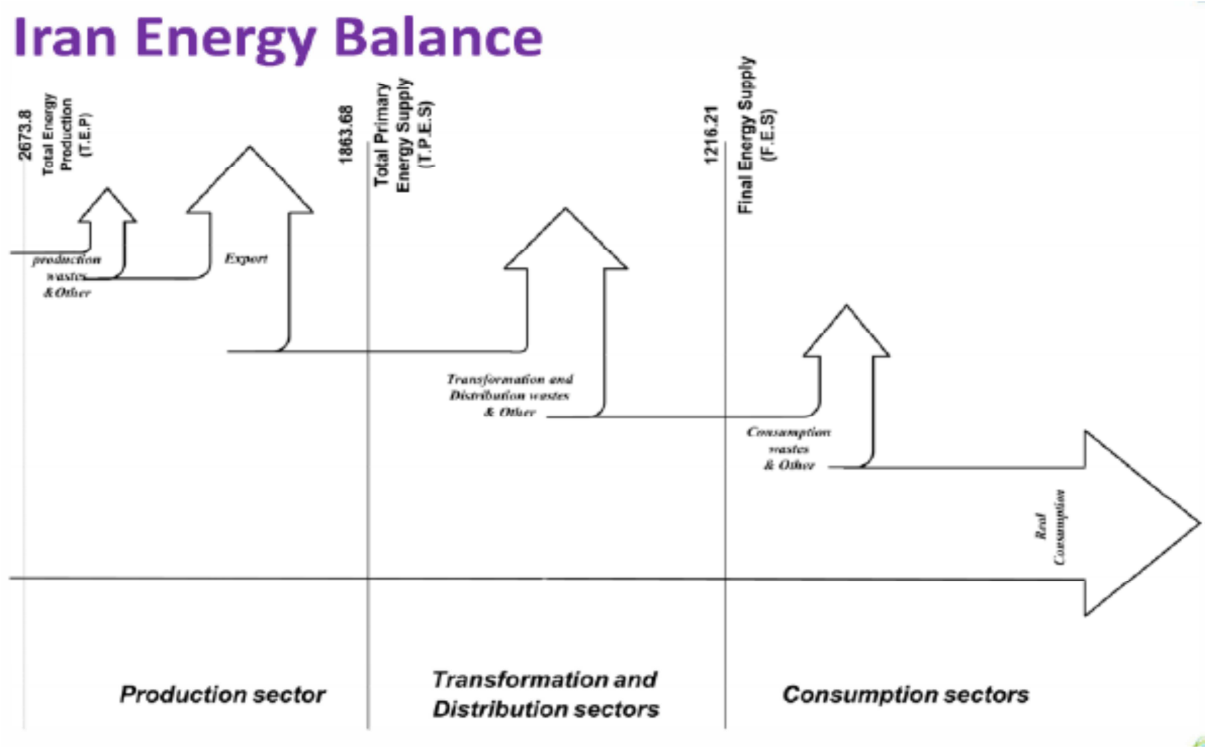


Figure 6: Iran Energy Balance



1.3.2. Legislation related to Energy conservation in Iran

The Islamic Republic of Iran has done a lot up to now concerning its legislation related to energy consumption, energy conservation and energy efficiency. These are the main policies concerning Energy conservation in Iran:

1. General policies on rectification of Energy consumption (2011):
- Energy intensity reduction to ½ till 2020 (Based on 2011)
- Priority to improvement of energy efficiency and productivity
- Drivers and penalties (process & Equipment)
- Energy standard setting and labelling
- Improvement of Energy Efficiency and Productivity culture

2. Rectification of Energy consumption law (2011):
- Supplementation of general policies on rectification of energy consumption including supply and demand management
- 12 chapters and 75 articles included:
    - Standards and criteria of energy consumption
    - Incentives for R&D
    - Energy consumption in Industrial, Agricultural, Transportation and Building sectors
    - Energy Supply and distribution
    - Renewable energies
    - Public awareness and training

3. Third to fifth National Economic, Social, and Cultural Development plan (2001-2015)
- Iranian Fuel Conservation company establishment based on 3rd national development plan
- Energy intensity reduction to 2/3 till 2020 (Based on 2011)
- Variety of Energy supply, improvement of Energy efficiency and development of CCHP
- Drivers for energy conservation and application of SEC (process and equipment)
- R&D of new EE/RE technologies

4. Rationalization of subsidies law (2012)
- To meet 90% of Persian Gulf FOB prices for Oil products till 2015
- Natural gas price to reach 75% of average price of Iran's exported natural gas
- Electricity price to reach actual production cost
- Distribution of income achieved from this rationalization below as:
    - 50% as grant to all Iranian people
    - 30% to assist industries to implement energy efficiency mechanism
    - 20% for NDF

5. The legal references and main general strategies of energy efficiency in general and particularly in the industrial divisions:

5.1 General policies to modify the consumption pattern
- Was instructed by Iranian Supreme Leader in 2010 and emphasizes efficiency and productivity culture, and fundamental and methods of optimization and conservation.

5.2 The Act of modification of energy consumption pattern
- A bill from the Government which was endorsed by the Parliament in 2011 and presents national strategies and policies in Energy Efficiency in different sectors.

5.3 The Subsidy Reform Act
- A bill from the Government which was endorsed by the Parliament in 2009 which is one of the main parts of Government's economic reform plan. This act refers to gratuitous helps to EE in different sectors of production, and encouraging policies for increasing productivity in these sectors.

5.4 General policies of resistive economy imparted by the Supreme Leader
- Was instructed by Iranian Supreme Leader in 2014 based on clause 110 of constitution and refers to using the capacities and opportunities of the subsidy reform act for increasing EE.

5.5 The bylaws related to the subject and the five year development plans of the country
- Based on the clause 123 of constitution 5 year national development plans are prepared by the Government to be approved by the Parliament. Currently the fifth national development is being implemented. This plan also emphasized EE in different sectors like industry, agriculture, and service.

6. National Iranian Productivity Organization (NIPO)

In 1965 Iran joined The Asian Productivity Organization (APO) – A non-political, non-profit, and non-discriminatory organization established in 1961 as a regional intergovernmental organization to contribute to the sustainable socioeconomic development of Asia and the Pacific through enhancing productivity. NIPO is responsible for coordination of all activities related to efficiency in all economic divisions and the territory of governmental, private and non-profit organizations.

6.1 Strategic Council of NIPO

This council holds a meeting once a year and if it is necessary to hold an extraordinary meeting, it can be demanded by the director of NIPO or at least three members of the council. The annual meeting is held after receiving the proposal of operational plans and financial estimations from the council of directors of efficiency committees in systems and organizations and one month before budgeting process begins for the next year.

Its main duties are:

- Fascinating and accelerating the efficiency movement in Iran and its development in line with the needs of country and the legal tasks
- Final investigation of annual performance and financial reports and annual budgeting approvals
- Encouraging the modelling and promotion of the capacity of human resource in local, national and international level
- Final approval of coordinating macro policies of different economic divisions and their executive approaches and encouraging cultural arenas, middle-term plans, persuasive plans and rewards for efficiency and its announcement by the organization
- Adopting supporting plans in line with development of efficiency network in the country.

1.4. Project overview

The project was initiated by UNIDO and the Government of the Islamic Republic of Iran as part of Iran's efforts towards promoting energy efficiency in five high energy consuming industrial sectors (Iron&Steel, Petrochemicals, Refinery, Brick and Cement) by adopting a national framework for Energy Management Standards (EnMS). It was designed as a four-year full-size project (FSP) as part of the GEF-4 replenishment cycle. The Project Preparatory Grant (PPG) was approved by GEF in September 2009 and endorsed by GEF Chief Executive Officer (CEO) in August 2012. The Project implementation started in October 2012. An overview of the Project is given in form of a Project Fact sheet in Table 1.

UNIDO, with a funding grant from GEF, is the Implementing Agency (IA) for the project "Industrial Energy Efficiency in Key Sectors in Iran", with the main objective being "to promote energy efficiency in five high energy consuming industrial sectors: Iron & Steel, Petrochemicals, Refinery, Brick and Cement Industry in Iran by adopting a national framework for Energy Management Standards (EnMS)".

Table 1 Project Fact sheet

Project Title	**Industrial Energy Efficiency in Key Sectors in Iran**
GEF ID	**3504**
UNIDO ID (SAP Grant Number)	**GFIRA12001**
Country(ies)	**Iran (Islamic Republic of)**
GEF Focal Area(s) and Operational Program	**Climate Change** **CC-2 Promoting energy efficiency in the industrial sector**
GEF Agencies (Implementing Agency)	**UNIDO**
Project Executing Partners	**Iranian Fuel Conservation Company (IFCO)**
Project Size (FSP, MSP, EA)	**FSP**
Project CEO Endorsement/Approval Date	**9 August 2012**
Project Implementation Start Date (PAD Issuance Date)	**10 October 2012**
Original Expected Implementation End Date (indicated in CEO Endorsement/Approval document)	**31 July 2017**
Actual Implementation End Date	**31 July 2017**
GEF Grant (USD)	**5,550,000**
GEF PPG (USD) (if any)	**100,000**
UNIDO Inputs (USD)	**150,000**
Co-financing (USD) at CEO Endorsement	**15,550,000**
Total Project Cost (USD) (GEF Grant + Co-financing at CEO Endorsement)	**20,850,000**
Mid-term Review Date	**30 December 2014**
Planned Terminal Evaluation Date	**31 July 2017**

Based on interviews with stakeholders, the project was identified and developed, in a highly participatory manner, with relevant national institutions and private sector actors involved in industrial energy efficiency in Iran.

Deadlines and milestones

The information on the main project dates and milestones is shown in Table 2:

Table 2 Milestones and main dates for the GEF-4 IEE project in Iran

Milestone	Expected Date	Actual Date
Project CEO Endorsement/Approval Date	July 2010	August 2012
Project Implementation Start Date (PAD Issuance Date)	August 2012	October 2012
Original Expected Implementation End Date (indicated in CEO Endorsement/Approval document)	September 2017	
Revised Expected Implementation End Date (if any)		
Mid-term evaluation completion	December 2014	March 2015
Terminal Evaluation Date	September 2017	

The project faced many delays before the actual beginning of project Implementation due to the fact that UNIDO Branches and Project Managers have changed. Originally, the Agency approval date was in November 2007, followed by the GEF CEO approval date in November 2009. The expected CEO Endorsement was in July 2010, and the actual one happened first in August 2012. Since then, the project started in an efficient pace with the actual implementation start in October 2012. Altogether, the project is achieving its targets by the time of the mid-term review.

Project Stakeholders

According to multiple sources involved in the project design phase, a wide range of stakeholders were consulted during the project design. The table 3 below lists the main stakeholders, showing in detail their role in project preparation and implementation, and per project component.

Table 3 Project Stakeholders per Project Component

Project Component		Entities	Responsibility	Location
All	All	IFCO (Iranian Fuel Conservation Company)	National executing partner	Tehran city
		MFA (Ministry of Foreign Affairs)	Stakeholders	Tehran city
		SABA (IEEO) (Iran Energy Efficiency Organization)	Stakeholders	Tehran city
		National Iranian Gas company	Stakeholders	Tehran city
		NIORDC (National Iranian oil refining & Distribution Co.)	Stakeholders	Tehran city
		Cement Association	Stakeholders	Tehran city
		Brick Association	Stakeholders	Tehran city
		IMIDRO (Mines and Mining Industries Development and Renovation organization)	Stakeholders	Tehran city
1	Energy agreements & other legislative drivers	IFCO	National executing partner	Tehran city
		SABA	Stakeholders	Tehran city
		Department of Environment	Stakeholders	Tehran city
		Cement Association	Stakeholders	Tehran city
		Brick Association	Stakeholders	Tehran city
		IMIDRO	Stakeholders	Tehran city
		National Gas company	Stakeholders	Tehran city
		NIORDC	Stakeholders	Tehran city
2	Sharing of EE best practices	Five industry sectors (all companies)	Beneficiaries	
		National communication expert	Stakeholders	Tehran city
3	Training, benchmarking & other events	Companies: 1) Sarooj, 2) Soufian, 3)Tehran and 4) Zabol Cements	Beneficiaries	1) Isfahan, 2) Tabriz, 3) Tehran, 4) Zadedan to Zabol cities
		Companies: 1) Kermanshah and 2) Regal petrochemical Co.s	Beneficiaries	1) Kermanshah and 2) Bandar Mahshahr cities

Project Component		Entities	Responsibility	Location
		Shazand oil refining co.	Beneficiaries	Arak city
		Oxin Steel Co.	Beneficiaries	Ahwaz city
		National experts/trainees	Beneficiaries	Most in Tehran, one in Shiraz, one in Isfahan, one in Tabriz
4	Direct Support to Industry	Esfahan Steel Co. (ESCO)	Beneficiaries	Isfahan city
		Hormozgan Cement Co.	Beneficiaries	Bandar Abbas , Bandar Khamir
		Abadan Oil refining Co.	Beneficiaries	Abadan city
		Ati Morvarid Pardis (Brick)	Beneficiaries	Isfahan city
5	Financial support	Five industry sectors (all companies)	Beneficiaries	
		Banks (Mellat and Sepah banks preference)	Stakeholder	Tehran city

It should be noted that the number of companies that have co-financed the project increased compared to the ones that were mentioned in the project document. The additional companies are: Esfahan Steel Co. (ESCO), Hormozgan Cement Co., Abadan Oil refining Co. and Ati Morvarid Pardis (Brick). Details on the financing and co-financing will be elaborated in the Efficiency chapter.

Project Implementation Arrangements

UNIDO is responsible for implementing the project, the delivery of the planned outputs and achievement of the expected outcomes. UNIDO is executing the project in collaboration with the concerned Government Agency – Iranian Fuel Conservation Company (IFCO), and all the other stakeholders: the eight companies where the Energy Management System (EnMS) has been implemented and the four industries which are provided by direct support from the GEF Grant for projects that will improve their industrial energy efficiency.

UNIDO is the GEF Executing Agency for this project. UNIDO is providing assistance in the procurement process for required equipment, in the selection of national and international consultants as well as the subcontractors in accordance with the operational rules and regulations.

UNIDO is also providing assistance on formal GEF procedures that applies to the project execution, including reporting issues and formal channel of correspondence between the project

and the GEF secretariat. GEF specialist is providing technical backstopping to the project as deemed necessary.

UNIDO is responsible for:

- The general management and monitoring of the project;
- Reporting on the project performance to GEF;
- Procuring the international expertise needed for delivering the planned outputs under the four project components;
- Designating the national consultant and the programme officer who will be the focal point of the project;
- Coordinating with the project steering committee to review the project during the project implementation period;
- Providing administrative support and financial budgetary follow up required for the execution of the project;
- Managing, supervising and monitoring the work of the international teams and ensuring that the deliverables are technically sound and consistent with the project requirements and the minimum GEF requirements for M&E.

Fuel Conservation Company (IFCO)

The Iranian Fuel Conservation company (IFCO) is a subsidiary of National Iranian Oil Company (NIOC) established in 2000 with the mission to regulate the fuel consumption in different sectors through review and survey of the current trend of consumption and executing conservation measures nationwide.

IFCO are responsible for the gathering of energy use data from the Iranian oil industries and this is currently being expanded to all industries in the country. IFCO has the following aims as part of its links to Government:

- Implementing energy conservation in industry,
- Enhancing public awareness in energy efficiency and fuel conservation by publishing books, magazines and through advertising campaigns,
- Enforcing fuel conservation measures,
- Producing high quality and efficient home appliances and fuel consuming system,
- Assisting research institutes and universities technically and financially to hold energy management training courses for government and private sectors,
- Providing comprehensive programs of energy conservation in transportation systems, and
- Providing disciplinary measures to support public conservation culture.

IFCO was to undertake energy audits in energy intensive industries and have undertaken 180 to date. They also have a major role in assessing if these companies are meeting the standards set by the Iranian National Standard and Industrial Research Organization. This role of auditing will be expanded through the Programme as it is seen as a very important part of the work. The expansion of this work will be supported through the greater knowledge of energy savings opportunities linked to the support of international experts and a tool kit of useful auditing equipment which will bring more focus to the existing work.

IFCO is to play a large part in the GEF/IFCO/UNIDO programme as they will provide significant co-financing and technical supporting role. It is essential that good liaison is developed between the PMT to ensure there is no cross-over of activities and each programme complements and

supports the other. The organization is to play a large role in the dissemination of the Programme outputs as they already have a strong network through their current activities.

Industry Sector Roles and Responsibilities

The Industrial sector trade bodies representing the "Big 5" Sectors are seen as key Stakeholders for this programme for a number of reasons, including:

- They will facilitate access/ outreach to all major (and many minor) industrial enterprises in Iran – vastly improving the programme's "gearing" (ratio of effort to reward) in its efforts to attract industrial enterprises to the Programme;
- Improve the credibility/ understanding of the Programme's aims and objectives;
- Help with the Energy Benchmarking exercises: Provide contact details of key people/ Organisations, help chase non-respondents, sanity check energy and production data provided by each site, produce the Benchmark report and disseminate findings;
- Identify sites that would most likely benefit from a "walk-through" audit;
- Act as a focal point for the Pilot-scale R&D work;
- Act as a focal point for the Case Study report write-ups; recognizing potentially sensitive information;
- Participate in the EnMS and System Optimization training exercises.

Their potential contribution to the Programme is substantial; without their co-operation and contribution, the Programme would have only a fraction of its intended impact.
The key Trade Associations include:

- Cement: ACIE - Association of Cement Industry Employers
- Petrochemicals: NPC – National Petrochemical Company
- Refineries: NIORDC - National Iranian Oil Refining and Distribution Company
- Steel: IMIDRO - Iranian Mines & Mining Industries Development and Renovation Organisation
- Bricks – no National Body, largely represented by local Groups. For programme, has been represented by Asia Watts

Advisory committee

To secure a constructive stakeholder dialogue throughout the project an Advisory Committee will be formed consisting of the Ministry of Mines, Ministry of Energy, National Iranian Oil Company and other representatives from relevant ministries, and business associations with interest in industrial energy efficiency, project development and finance. The main role of the Advisory Committee will be to provide advice and feedback on the project design and support implementation during operations with policy support and by facilitating key partnerships across the market. The Advisory Committee also provides a forum for the advancement of sustainable energy finance in industry. The Advisory Committee members typically play important roles in promoting and sustaining a favorable policy environment for investments.

Ministry of Mines & Industry

Play a major role in the liaison with industry in Iran. A meeting with representatives of the Ministry has been held during the programme development stage. They have a leading role in research of equipment to be used and recommended to the intensive energy sectors that the programme will focus its work toward. It is seen as important to have a good working relationship with the ministry and during the programme inception work will be undertaken to form strong links.

Other stakeholder involvement
Through the project development stage of the UNIDO project team have engaged with local stakeholders through meetings at representative's offices in Iran. Some of the following organizations have been engaged during the programme development and have also attended stake holders meeting:

- Ministry of Oil
- Department of the Environment
- SABA
- Ministry of Information, Technology and Communication
- Ministry of Electrical Power

All of the above mentioned Government offices have a role to play in the rolling out of the Iranian Energy Efficiency strategy and, for this reason, all potentially have a part to play in the GEF/IFCO/UNIDO Programme.

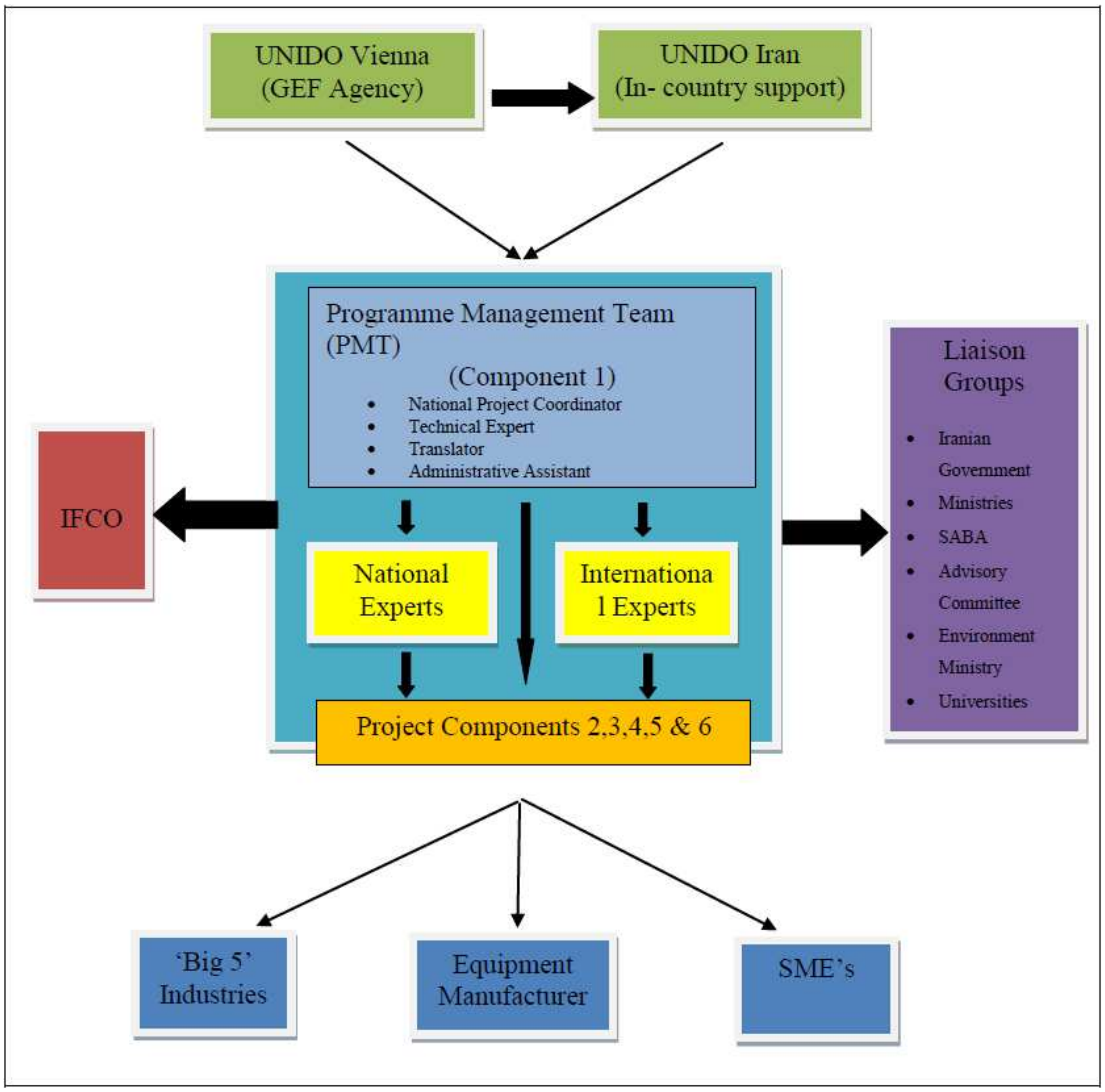
PROJECT IMPLEMENTATION ARRANGEMENT: The successful implementation of the programme depends to a high degree on the effective Organization of the following aspects:
A. Effective programme oversight and management;
B. Successful liaison with the Iranian Government and in particular the Ministries of Mines & Industry and IFCO who will be responsible for the Iranian Government Energy Efficiency Programme.
C. Develop good cooperation with management of participating enterprises and business associations;

Although the programme is complex and is divided into six components, all are all closely related. Therefore a central project management structure is proposed as depicted in the following chart.

It is essential for the Programme Management Team (PMT) to complement the International Experts with Iran counterparts who will function as deputies of the international experts. The combined expertise and experience of the team will facilitate management and communication with the wide range of Iran organizations that are targeted by the programme. It also provides the transfer of knowledge of international practices to the Iran experts.

This structure shown on Figure 7 allows for a strong integration of the implementation of the different components and provides a central focal point for the Iran Government.

Figure 7: Project Implementation Arrangements



Project Financial Framework

In the Project document, the GEF financing was planned to amount US$ 5,450,000. At the time of the Mid-Term Review, the total Executed Budget of the GEF Grant amounted to US$1,558,322, which represents 29 percent of the GEF Grant spent to date.

The co-financing planned in the project document amounted US$15,515,000. At the time of the mid-term review, the materialized amount of co-financing was US$2,239,005, which is 15 percent of the planned co-financing. The low materialized co-financing is due to missing data, especially on the in-kind co-financing from IFCO.

Project financial details will be discussed under the chapter Efficiency.

2. Introduction to the Mid-Term Review

According to the GEF Monitoring and Evaluation Policy, Mid-Term Review are mandatory for all GEF Medium Size Projects (MSPs) and Full Size Projects (FSPs). Hence, UNIDO as an Implementing Agency of the GEF, and in accordance with UNIDO Evaluation Policy, an independent Mid Term Review of the project: "Industrial Energy Efficiency in Key Sectors in Iran" was conducted in the period from February 2014 to April 2015.

2.1 Evaluation Scope and objective

The mid-term evaluation covered the duration of the project from project implementation start in October 2012 to the mid-term review date in February 2015. The scope of the evaluation includes assessment of project performance and progress against the evaluation criteria: relevance, effectiveness, efficiency, sustainability and impact.

The overall objective of the evaluation is to assess to what extent the project is achieving the expected results at the time of the mid-term evaluation, i.e. to what extent the project has promoted energy efficiency in five high energy consuming industrial sectors (Iron&Steel, Petrochemicals, Refinery, brick and cement) by adopting a national framework for Energy Management Standards (EnMS).

The specific objectives of the evaluation are:

- Verification of prospects for development impact and sustainability,
- An analysis of the attainment of global environmental objectives, project objectives, delivery and completion of project outputs/activities, and outcomes/impacts based on indicators,
- Re-examination of the relevance of the objectives and other elements of project design according to the project evaluation parameters,
- Enhancement of project relevance, effectiveness, efficiency and sustainability by proposing a set of recommendations with a view to on-going and future activities until the end of project implementation,
- Gender mainstreaming, and
- Procurement.

2.2 Evaluation Approach

The mid-term review was conducted in accordance with the UNIDO Evaluation Policy and relevant UNIDO and GEF evaluation guidelines and policies. It was carried out as an independent in-depth evaluation using a participatory approach whereby key parties associated with the project were informed and consulted throughout the evaluation.

The evaluation team used different methods to ensure that data gathering and analysis deliver evidence-based qualitative and quantitative information, based on diverse sources: desk studies, literature review, individual interviews, focus group meetings, direct observation, presentations and feedback review.

The methodology was based on the following:

1. A desk review of project documents and relevant country background information:
   (a) The original project document, the inception phase report, monitoring reports (such as progress and financial reports to UNIDO and GEF annual Project Implementation Review (PIR) reports), Project Operational Manual, project annual work plan, output reports and relevant correspondence.
   (b) Notes from the meetings of committees involved in the project (e.g. approval and steering committees).
   (c) Other project-related material produced by the project.
2. Interviews with project management and technical support including staff and management at UNIDO HQ and in the field, staff associated with the project's financial administration and procurement. List of all interviewed persons is given in Annex B.
3. Interviews with project partners including Government counterparts, GEF focal points and partners that have been selected for co-financing as shown in the corresponding sections of the project documents.
4. On-site observation of results achieved in demonstration projects, and interviews with potential beneficiaries of improved technologies. The evaluation field mission included visits to two of the eight sites where the EnMS implementation is taking place, namely field visits to the Regal Petrochemical Co. and Oxin Steel company, and to the and visit to two of the four companies where there is direct support to industry for industrial energy efficiency projects from the GEF Grant, namely: Esfahan Steel Company (ESCO) and Ati Morvarid Pardis from the Bricks sector.
5. Interviews with the relevant stakeholders involved in project management at UNIDO HQ in Vienna and in the Islamic Republic of Iran and Project Steering Committee (PSC) and members and the various national and sub-regional authorities dealing with project activities as necessary were conducted.

Evaluation Work Plan

The "Evaluation Work Plan" included the following steps:

1. Following a desk review of project documentation, a briefing was done by the project manager and the methodology was developed.
2. In the period from 05 March 2015 to 15 March 2015, a field mission was conducted by the international evaluation expert together with the national expert.
3. At the end of the field mission, the evaluation team made a presentation of the preliminary findings and recommendations to the Counterparts and the Project Management Unit (PMU) responsible staff.
4. Following the field mission, the main findings, conclusions and recommendations were presented and discussed with the project manager, evaluation representative and other relevant stakeholders at UNIDO Headquarters.

Evaluation team composition

The evaluation team was composed of one international evaluation consultant acting as a team leader and one national evaluation consultant, contracted by UNIDO.

The evaluation team was supported in its work by the Project Manager at UNIDO, the Project Management Unit (PMU) and the UNIDO Office in Iran, the Government the Islamic Republic of Iran, UNIDO Office for Independent Evaluation the UNIDO GEF Coordinator.

2.3 Information sources

Written documents and reports from this project were reviewed in the inception phase at UNIDO Headquarters. Furthermore, relevant project documents were provided by the PMU, the National Project Manager, the Government of Iran, IFCO, SABA, DoE, ESCO, Oxin Steel, Regal Petrochemical in paper and electronic format in English and Farsi during the evaluation field mission (List of Documents Reviewed is given in Annex D). Interviews with project stakeholders were held at UNIDO Headquarters and the Islamic Republic of Iran during the evaluation field mission (A list of interviewed stakeholders is provided in Annex B). The evaluation field mission included visits to two of the eight sites where the EnMS implementation is taking place, namely field visits to the Regal Petrochemical Co. and Oxin Steel company, and to the and visit to two of the four companies where there is direct support to industry for industrial energy efficiency projects from the GEF Grant, namely: Esfahan Steel Company (ESCO) and Ati Morvarid Pardis from the Bricks sector.

2.4 Evaluation limitations

This mid-term evaluation is written solely in English language. Limitations to this evaluation was that some of the documents provided for the Mid-Term Review were in Farsi, however the same was mitigated through the presence of a National Evaluation Consultant. Also, some of the interviews were conducted in Farsi, which were done also by the National Evaluation Consultant.

2.5 Intended use of the Mid-Term Review Report

This mid-term review was conducted in accordance with GEF and UNIDO monitoring and evaluation policies and procedures and in line with United Nations Evaluation Group (UNEG) norms and standards.

The intended users of this mid-term review are the UNIDO Energy Branch (ENE), Government Counterparts in the Islamic Republic of Iran, Project Management Team, and the GEF. If relevant, the mid-term review report may be disseminated to additional stakeholders to share lessons learned and future recommendations.

3. Project assessment

3.1 Project design and relevance

3.1.1 Relevance

The assessment of project relevance takes into consideration the project's contribution to the achievement of national objectives regarding industrial energy efficiency in the Islamic Republic of Iran, GEF strategic priorities, and the project's relevance to UNIDO's mandate.

Relevance to national priorities

The Government of Islamic Republic of Iran has placed Industrial Energy Efficiency in its agenda. There are two Ministries within the Government that are responsible for Energy issues in the Islamic Republic of Iran: the Ministry of Oil (MoI) and Ministry of Energy (MoE). MoI is in charge of implementation of major policies of the Islamic Republic in Iran in the oil and gas sectors including producing, developing, planning, and supervising all operations in both upstream and downstream oil industry. While supplying energy and providing foreign currency revenues for the country, the Ministry of Oil creates industrial and energy hubs, which are prerequisites for developing other industries, creating job opportunities and helping the Iranian economy to flourish. The Ministry of Oil also plays an essential role in Iran's international interactions and energy diplomacy and enjoys a unique status among oil producers and gas exporters in the GCEF and OPEC. The Ministry of Energy (MoE) in charge of the regulation and implementation of policies applicable to energy, electricity, water and waste water services.

The National Counterpart for this GEF-4 project is the Iranian Fuel Conservation Company (IFCO), which is a subsidiary of the National Iranian Oil Company (NIOC). NIOC is one of the four National Companies of the Ministry of Oil. IFCO was established in 2000 with the mission to regiment the fuel consumption in different sectors through review and survey of the current trend of consumption and executing conservation measures nationwide. IFCO is contemplating to introduce a modern energy management reformation to all Iran economic subsystems and make the way to achieve every goals set for conservation in all energy carriers defined in the sustainable energy program of the country.

The fact that Iran has two Ministries directly responsible for energy issues shows the importance of energy, energy conservation and energy efficiency for the country. Details on the Energy Conservation legislation in the Islamic Republic of Iran are given in the chapter: 1.3.2 Legislation related to Energy conservation in Iran. The most important law concerning energy efficiency in Iran is "The Act of modification of energy consumption pattern, number 1770" which was passed in Iran in 2011. The Government of the Islamic Republic of Iran also involves other supporting mechanisms that would promote the need for industrial energy efficiency in the Islamic Republic of Iran, such as constantly cutting the state subsidies for the industry.

Given the facts above, it is clear that this project is in line with all the government policies and decisions and also fits well within the national priorities of promoting industrial energy efficiency in the five key energy consuming industrial sectors.

Relevance to GEF priorities

Furthermore, the relevance to GEF Climate Change focal area's Strategic Program CC 2 – Industrial Energy Efficiency in Key Sectors is very clear. Through promoting of industrial energy efficiency in five key high energy consuming industrial sectors: Iron & Steel, Petrochemicals, Refinery, Brick and Cement industries by adopting a national framework for Energy Management Standards (EnMS), as well as implementing project and action plans that will cause energy savings, and therewith reduction of CO2 and GHGs (Green House Gases), the project is fully following the GEF priorities and contributed to reaching GEBs (Global Environmental Benefits).

Relevance to UNIDO's priorities

The project is in line with UNIDO's mandate, core competences and can benefit from UNIDO's comparative advantage as GEF's implementing agency in the industrial energy efficiency and climate change domain. The organizations' mandate is to support inclusive and sustainable industrial development, having strong core competences in the field of green industry, industrial energy efficiency and renewable energy for productive uses.

This industrial energy efficiency project falls under the theme of energy and environment, and it clearly increases the industrial energy efficiency through implementation of EnMS in eight companies from the most energy intense industries, and providing direct support to industry for five projects that will implement specific larger scale project for reaching greater degree of industrial energy efficiency for lowering their initial energy consumption.

Based on the assessment of project relevance to local and national energy priorities, policies and strategy of the Government of the Islamic Republic of Iran, to GEF's strategic priorities and objectives**,** and to the GEF focal area of climate change and Strategic Program CC 2 – Industrial Energy Efficiency in Key Sectors, and to UNIDO's mandate, the overall project relevance is considered to be highly satisfactory and the project as such is highly relevant for all mentioned stakeholders.

3.1.2 Design

The assessment of project design assesses the adequateness of the project to clear thematically focused development objectives set by the GEF, the attainment of which can be determined by a set of verifiable indicators. The projects are expected to be prepared in a participatory manner and with contributions of national stakeholders and/or target beneficiaries. It is required to formulate the project based on the logical framework approach, which was the case with the Project Results Framework for this Full-Size Project (FSP).

The project document has been prepared based on results of various studies, assessment of the relevant programmes implemented in the Islamic Republic of Iran, consultations with stakeholders, surveys etc..

The UNIDO approach in industrial energy efficiency focuses not only on technical improvement and implementation of demonstration projects, but also on improvement in policy, management, investment strategy, operations, and financing. The overall project design is relevant, with participation of local stakeholders in project identification; yet, some of their comments were not integrated in the original project document. The Project Results Framework with its outcomes and outputs, and target indicators was not developed adequately, which did allow only for limited proper adaptive management and monitoring of project results. The main issue in the development of the Project Results Framework was that it was developed based on non-realistic baselines, for some of the outputs there was not at all a baseline, which all led to setting not feasible and unrealistic outputs and target indicators for the project.

Considering the above, targets on number of case study reports on EE investments, number of staff trained in system optimization, managers trained in financial assessment, number of general / walk through energy audit reports and detailed technical audit reports, as well as

purchasing and installations of submeters / M&T software were overly ambitious. Especially project component 1 of Energy Agreements / Legislative Drivers has to be completely amended to the current baseline in Iran.

Project objectives, outcomes and outputs as stated in the original project document and Project Results Framework

The project aimed to make a significant contribution towards Iran's long-term energy efficiency (EE) strategy, which aims to reduce relative energy consumption across all industrial sectors by 20% by 2024/5 compared with 2008 as the base-year. More specifically, the project targeted to promote energy efficiency in five high energy consuming industrial sectors: Iron & Steel, Petrochemicals, Refinery, Brick and Cement industries by adopting a national framework for Energy Management Standards (EnMS).

The project aimed to accelerate the uptake of EE by setting up voluntary energy agreements with industrial sectors, providing a framework for National Energy Management Standards, assisting in capacity building through training, developing targets, providing benchmarks and most importantly, by identifying technology improvement options to these high energy intensive industrial sectors. Energy Management Systems (EMS) were proven to be an effective tool for enterprises in other countries by raising the annual efficiency improvement by 1-2 percentage points over a period of many years.

The project supported the GEF-4 climate change strategy priority 2: Energy Efficiency in Industry, through promoting the deployment and diffusion of energy efficient technologies and practices in industrial production and manufacturing processes by covering a wide spectrum of the energy systems in industrial manufacturing and processing, including combustion, steam, process heat, combined heat and power, compressed air, motors, pumps and fans.

Additionally, the project aimed to:

- Remove barriers to energy efficiency,
- Develop and transform markets for energy so they grow and operate efficiently towards a financially competitive but simultaneously less carbon intensive path, and
- Reduce the Global environmental impact of Iran, in particular through reduced CO2 emissions.

The project was expected to generate cumulative direct GHG emission savings of 0.6 billion tonnes CO2eq. Cost of the resource for direct emission reduction will be 0.1 USD/tonne CO2eq.

Along with the growing recognition for environmental stewardship, the Energy Subsidy - which currently means that natural gas, oil and electricity prices are very low compared with International market prices – is to be phased out. Therefore, there will be substantial cost-saving benefits to Industry by taking EE action and investment, and those that pre-empt the phasing out of the subsidy will be better placed to deal with the potential implications of rapid rises in energy costs.

Furthermore, the project should accelerate the uptake of EE across the 5 key industrial sectors - Iron & Steel, Petrochemical, Refinery, Brick and Cement - that collectively consume 71% of Iranian industrial energy by:

- Setting up voluntary energy agreements with industrial sectors,
- Providing a framework for National Energy Management Standards (EMS),
- Assisting in capacity building through training,
- Developing targets, providing benchmarks,
- Identifying technology improvement options to these high energy intensive industrial sectors,
- Sharing of good EE information via a dedicated web-site providing benchmarking, good practice advice, Iranian Case study examples of EE investments, and others, and
- Introducing through this project an energy-saving loan scheme, namely a "revolving" EE fund, as a means of encouraging the most appropriate financial mechanisms for encouraging EE investment in Iran.

This project was to help to accelerate the uptake of EE and make substantial energy cost savings in the five key industrial sectors: Iron & Steel, Petrochemicals, Refinery, Brick and Cement. (whilst simultaneously reducing Iran's CO2 emissions and freeing up indigenous gas and oil for export), by working closely with key Iranian Government Ministries and Bodies, as well as with and other important National stakeholders, to achieve these aims through a variety of EE mechanisms described above.

The project entailed five project components:

Project Component 1 (PC1): Within this project component "Energy Agreements and other Legislation/ Drivers" the project should liase with the Iranian Government regarding national targets and milestones, and negotiations for series of voluntary energy agreements with industry should be facilitated.

PC1 contains the following three outputs:

1. Agreed National energy and CO2 saving targets to harmonize with project objectives
2. Series of bespoke Energy Agreements with Large energy-intense Industry in Iran
3. Series of group Energy Agreements with SMEs in "Big 5" sectors

Project Component 2 (PC2): "Sharing of Good Energy Efficiency practices" through preparing a dedicated programme website, practice energy efficiency advice of international best practices, and other information sharing with the following outputs:

1. Building and maintaining porgramme website,
2. Making BREF, International Benchmarks, GP Guidance and Case Studies, etc. - in Farsi, and
3. Advertising events, publications, other programme activities.

Project Component 3 (PC3): "Training, Benchmarking and other Events" through energy management, financial appraisal, other Conference/ Exhibitions/ etc., and equipment training/ capacity building with the following outputs:

1. 3 introductory EnMS training workshops to 100 managers in 50 large enterprises, ½ day each
2. 100 managers trained in financial appraisal (2 d workshop)

3. 600 staff trained in system optimization (approximately 20 x 1 to 3 day workshops)
4. 20 Benchmarking and M&T workshops of 3-day duration
5. 20 conference/exhibitions linked to system optimization

Project Component 4 (PC4): "Direct support to Industry" through energy performance benchmarking, walk through energy audits, detailed follow-up technical audits, and good practice case studies. Furthermore, energy audit equipment will be provided, metering and M&T will be done, and pilot schemes/test rigs will be made with the following outputs:

1. Benchmark reports of 5 sectors/ sub-sectors with large numbers of similar activities. Repeat benchmark after 2-3 years >600 walk-through audit reports,
2. >400 "detailed study" reports,
3. 60 x Iranian GP CS documents,
4. Pool of auditing equipment held & available through PO,
5. Approximately 100 sites supported for EMS meters and software, and
6. Grants of (typically) $500k for 4 pilot schemes/ demos.

Project Component 5 (PC5): "Financial Support" will be done through making links to funding mechanisms and revolving (ESCO type) fund for Energy Efficiency support with the following outputs:

1. Use Programme to link to and make use of other financial mechanisms,
2. Accelerate EE equipment loans; pump primer for other programmes, and
3. Revolving fund self-sufficient and still supporting EE loans.

Project risk identification

Project risks were not always suitably identified in the Project Document with appropriate mitigation measures. Targets, assumptions and timeframes at design were overly optimistic:

- Project risks related to overly ambitious and unrealistic targets for the duration of project implementation were under-estimated.
- Assumptions relating to feasibility of reaching many targets as set are over-estimated. Baseline studies at project design were weak.
- Underestimation of time and challenges in working in Iran concerning UN Sanctions and necessity of approval of UN Sanctions Committee.
- Other project risks and assumptions remain in place and risks are low.

Participatory identification and preparation of the project

The Project was identified and prepared through cooperation with local stakeholders, and through the cooperation previously established within the Islamic Republic of Iran enabling activities supported by GEF (implemented with UNIDO involvement as well). The Iranian Government and the local project management office adopted the document, showing strong ownership of the project.

Project logical framework

The Project Logical framework or Project Results Framework approach has been used for the design of activities to implement the project. The project results framework developed for this project is weak and does not correspond to the veritable baseline of conditions concerning industrial energy efficiency in Iran, it contains only partly baseline indicators which are feasible. However, it has to be noted that some of the indicators are well defined SMART indicators with concrete targets.

Based on the analysis given above, the project design is weak, as it was done with only partly participation of local stakeholders in project identification. Due to the fact that some of the comments of local stakeholders were not considered during project design, the Project Results Framework and target indicators were not well and adequately developed, primarily due to the missing realistic baseline for energy efficiency in Iran for some outputs. Therefore, a new baseline has to be set where necessary, and based on this baseline, new feasible and realistic outputs and target indicators for the project in the Project Results Framework ought to be set. The new Project Results Framework has to be approved by the Project Steering Committee (PSC) in close consultation with the GEF Coordination Unit and UNIDO Office for Independent Evaluation.

Amendments to project design should be carried out in order to:

- Be in line with country needs and resources available,
- Reflect the real baseline situation that was not taken into account at time of original project design,
- Take into account accommodations to be made concerning co-financing, and
- Be more realistic.

Specifically per project component the following has to be changed:

Project Component 1 – Activities and targets concerning Energy Agreements / Legislative Drivers have to be completely amended to the current baseline in Iran – Introduction of Energy Efficiency Certificates (White Certificates).

Project Component 2 - Feasible targets need to revised based on realistic baseline for EE in Iran.

Project Component 3 – Trainings should be adjusted to the real needs of the Iranian companies and Government needs and priorities. Also, feasible targets and the number of trainings need to be revised.

Project Component 4 - Feasible targets on the number of detailed technical energy audits conducted, benchmarking reports, purchasing metering and M&T equipment etc. need to revised based on realistic baseline for EE in Iran.

Project Component 5 – Financial Mechanisms / Support – clear conditions have to be agreed for setting a revolving fund for EE projects in Iran.

3.2 Effectiveness

Project effectiveness assesses to what extent the project outcomes, outputs and long-term project objectives have been achieved.

Overall, the planned activities in this project have been implemented within the periods they were planned for in the project work plan. Table 4 presents a summary of the assessment of project effectiveness per project component, outcome, output, and indicators on the achieved targets, as well as their ratings.

Table 4 Ratings of effectiveness assessment according to project components

Outcomes by Project Component	Indicator(s)	Target Level	Progress To Date	Rating (HS/S/MS/MU/U/HU)
Component 1: Energy Agreements/Legislative Drivers				
Outcome 1.1 Policy Support: Energy Agreements and other Legislative Drivers	1. Liase with Iranian Government regarding the national targets and milestones 2. Facilitate negotiations for series of voluntary energy agreements with industry	1. Agreed National Energy and CO2 saving targets to harmonize with the project objectives. 2. Series of bespoke energy agreements with large energy intense Industry in Iran 3. Series of group Energy agreements with SMEs in "Big 5" Sectors	• Based upon the proposal of IFCO, Emission trading scheme is added to the scope of work of this component. • The terms of reference (TOR) of the whole work was finalized in agreeing of IFCO and UNIDO on March 2014 in order to achieve the outcomes of the components. • National and international emission trading scheme were nominated by IFCO and the recruitment was performed on May and June 2014. • The reports subject to international best practices and general framework of cap and trade have been submitted by international expert of mission trading. • The first policy workshop with policy makers has been arranged and will be held after this meeting on 14-15 October 2014.	MS

Outcomes by Project Component	Indicator(s)	Target Level	Progress To Date	Rating (HS/S/MS /MU/U/HU)
Component 2: Sharing of Good Energy Practices				
Outcome 2.1: Sharing of good EE practices	1. Dedicated Programme Website 2. International Best practice/Good practice EE advice 3. Other information sharing	1. Building and Maintaining the programme website 2. Making BREF International Benchmarks, GP guidance and case studies, etc.. in Farsi 3. Advertising events, publications, other programmes	• A national communication expert, in order to wok on the website has been selected and the work has been started. • The first draft of website planning has been reported to UNIDO and IFCO. • Several meeting has been held with IFCO technical expert in 5 key sectors. It was discussed over content of the website related to 5 key sectors, key audiences, key stakeholders, etc. in order to design the key messages and appropriate Medias for each category of audiences/stakeholders. •The expert has presented the work plan and submitted to IFCO for feedback.	MS
Component 3: Training & Events				
Outcome 3.1:Training, benchmarking and other events	1. Energy Managements 2. Financial appraisal 3. Other conference/exhibitions, etc. 4. Equipment	1. 3 x half day introductory EnMS training workshops for100 managers in 50 large enterprises 2. 100 managers trained in financial appraisal (2 day	• Half-day awareness seminar in 5 key sectors addressed to top managers and energy managers was held on November 2013. • On-site EnMS training in 9 selected	S

Outcomes by Project Component	Indicator(s)	Target Level	Progress To Date	Rating (HS/S/MS/MU/U/HU)
	training/capacity building	workshop) 3. 600 staff trained in system optimization (20 x 1 to 3 day workshops) 4. 20 x benchmarking and M&T workshops of 3 day duration 5. 20 x conference /exhibitions linked to system optimization	enterprises has been set up and is ongoing. • The planning phase of EnMS in nine enterprises is ongoing and is in the last steps, except for Tehran Cement in which work has been recently started. In the planning phase up to know, the energy policy has developed, roles and responsibilities are finalized, and significant energy uses are mostly identified. • First module of Expert training in three days was held on April 2014. • Two webinars meeting in participation of national experts, energy teams of enterprises are held and the progress of each project has been presented and reported to the international consultant.	
Component 4: Direct support for Industry				
Outcome 4.1:Direct Support to Industry	1. Energy Performance Benchmarking 2. Walk-through energy audits 3. Detailed follow-up technical audits 4. Good practice case studies 5. Energy audit	1. Benchmarking reports for 5 sectors/sub-sectors with large numbers of similar activities 2. 600 x walk-through audit reports 3. > 400 “detailed study”reports 4. 60x Iranian GP CS	**Pilot I: Implement Energy efficiency pilot project in Iron & Steel sector (Esfahan Steel Company):**• The technical specification of the project in detail was presented by the international consultant. • Trust Fund Agreement has been signed with Esfahan Steel Company on 20 July 2014. • TOR of technical specification has been	S

Outcomes by Project Component	Indicator(s)	Target Level	Progress To Date	Rating (HS/S/MS/MU/U/HU)
	equipment 6. Metering and M&T 7. Pilot schemes/test rigs	documents 5. Pool of auditing equipment available 6. 100 x sites provided with EnMS meters and software 7. Grants provided to pilot projects	finalized with agreement of all parties (UNIDO, company and IFCO) and tender document are prepared. **Pilot C: Implement Energy efficiency pilot project in Cement sector (Hormozgan Cement Company)**• Working Arrangement has been signed between UNIDO and Hormozgan Cement Company, the selected company on 16th February 2014. **Pilot R: Implement Energy efficiency pilot project in Oil refinery sector (Abadan Oil refining Company)** • Abadan oil refining Company	

Outcomes by Project Component	Indicator(s)	Target Level	Progress To Date	Rating (HS/S/MS/MU/U/HU)
			were recommended by IFCO and NIORDC as pilot site and among proposed EE project, finally the project of " …. " was selected as pilot project. • Finally all terms of the Trust fund agreement have been agreed and cleared by the company and NIORDC on March 2014. **Pilot P: Implement Energy efficiency pilot project in Petrochemical sector** • Call for proposals in this sector was performed by NIPC (National Iranian Petrochemical Company). • The proposals were assessed, based upon UNIDO's criteria for pilot projects, none of the proposals are accepted. New plan is to wait for extracting action plans in EnMS projects and from them, a desirable EE project may be defined. **Pilot B: Implement Energy efficiency pilot project in Brick sector** Received Proposal: New enquiry from all brick company Form of cooperation and co-financing was determined • Design scoring system and set the criteria Meeting with Interested companies Select the best EE technology It is decided that all received proposals, form of co-financing and M&V work will be proposed and finalized in Steering committee meeting	

Outcomes by Project Component	Indicator(s)	Target Level	Progress To Date	Rating (HS/S/MS/MU/U/HU)
Component 5: Financial mechanism support				
Outcome 5.1:Financial Support	1. Make links to funding mechanisms 2. Revolving (ESCO type) fund for EE support	1. Use programme to link to and make use of other financial mechanisms 2. Accelerate EE equipment loans 3. Revolving fund established.	• International expert has been assigned in order to design the best suited financial Scheme. • The first phase of the work based on proposed work plan has been performed and need the feedback from international consultant.	MS

Within the project component 1 – Report on Energy Agreements / Legislative Drivers prepared, a complete change of PC1 and its outputs and indicators is suggested. There was a substantial change of baseline and outputs through passing "The Act of modification of energy consumption pattern, number 1770" approved in Iran in 2011, based on which there will be no voluntary energy agreements with industry. Mechanisms of handling White Certificates on Energy Efficiency and Green Certificates on Carbon Mitigation, as well as verifiable indicators should be identified. IFCO would like to initialize a creation of Carbon Bourse (Stock Exchange) in Iran, and it has to be checked if the same is feasible within the timeline of this project's implementation. IFCO / Ministry of Oil (MoO) will give proposal to the Parliament on Legislation on Carbon Trading in Iran. MFA and MoO will kindly provide support in speeding up of the process of EE legislation in Iran when needed. Furthermore, a policy workshop on Energy Efficiency Certificates will be organised.

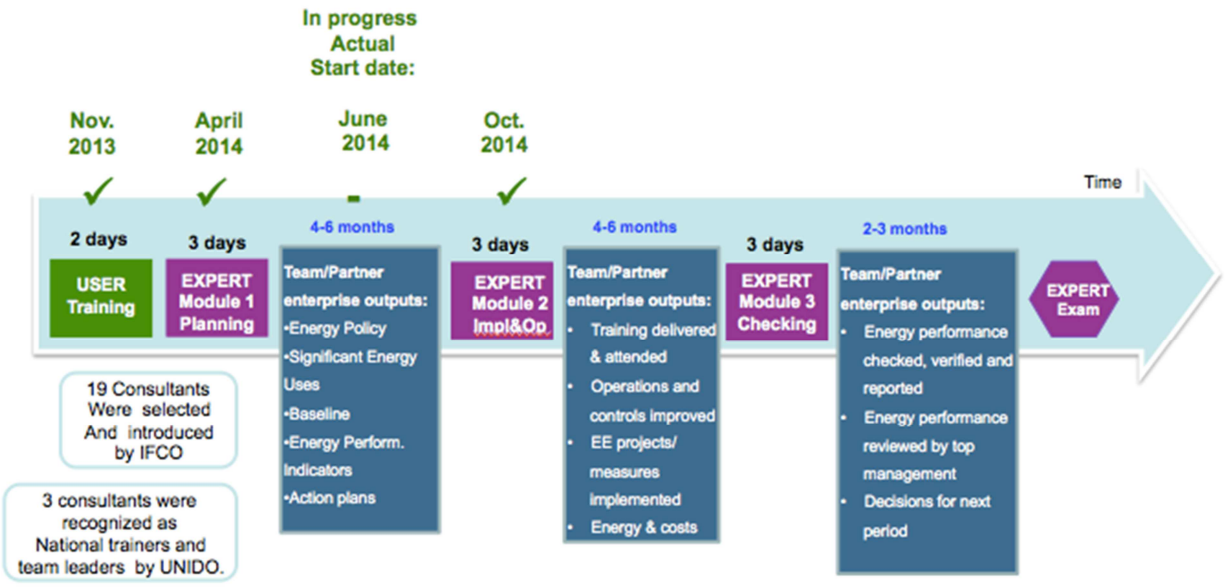
For the project component 2 - National consultant has been recruited to prepare communication strategy, for website planning (waiting on IFCO to update their website and use the same company for its design), awareness raising on EE in all big 5 sectors and designing a campaign for them. The international data bank on energy efficiency technologies will be provided by UNIDO, national data bank will be provided by IFCO and made available on the website.

As part of the project component 3 – EMS awareness workshop for 78 managers from 30 enterprises was done. Implementation of a practical on-site extensive EnMS Training in eight Companies is ongoing. Figure 8 shows the selected sites for implementing the EnMS pilot projects, and figure 9 presents the on-site EnMS Training – the structure of UNIDO for Training and implementing Energy Management System.
Furthermore, workshops in System optimization (SO) will be done for Fans and Compress Air System; IFCO will share data for their training (up to now according to IFCO 100 persons trained) in SO.

It is suggested that Train of Trainers (ToT) should be done on energy audit and benchmarking courses for Iranian experts, however the same has to be discussed in details with IFCO.

Figure 8: Selected sites for implementing EnMS pilot projects

Figure 9: On-Site EnMS Training - Structure of UNIDO for Training and implementing Energy Management System



Within the project component 4 until now, according to IFCO there are 200 detailed audits made by IFCO since 2010 and it includes all branches of industries. However, for the purposes of this project the timeline for consideration is from August 2012, at the time the Project was endorsed by the GEF CEO, and the figure has to be adapted accordingly with IFCO.

Moreover, Train the Trainers (ToT) workshop together with SABA with international experts for metering and M&T should be planned instead of the previously planned output of purchasing and installing metering equipment in 100 companies.

Concerning the GEF Grants for Direct support to industry, amounts of US$ 500,000 each for ESCO Steel Company and for Abadan Oil Refinery, US$ 351,139 for Hormozgan Cement Plant, and US$ 15,000 Ajor Sofal Izadi (Ati Morvarid Pardis) Brick Company will be provided for pilot schemes/ demonstration projects from the GEF Grant. Their implementation has started and for the first three where there is direct procurement will be prolonged due to Approval for the procured equipment needed by the UN Sanctions Committee. Figure 10 shows the details on the implementation of the pilot (demonstration) projects.

Figure 10: Pilot (Demonstration Projects) from the project component Direct Support to industry

Sector	Completed Works
Iron & Steel: Implementing Hot Charging in CCM #5 and rolling mill #500	▪ TFA with ESCO signed on 20 July 2014. ▪ Technical Specification of project finalized. ▪ International public tender successful with an Austrian Company INTECO. ▪ Mission done at ESCO, awaiting technical report for UN Sanctions committee.
Cement: 1. KIDS system in Grate Cooler 2. Bucket elevator	▪ Working arrangement with Hormozgan signed on February 2014. ▪ International Bidding for project 1, performed in December 2014 successful with a German company CemPro Tec GmbH. The engineering work has been launched in January 2015 and local tender for project 2 for which there is no need for an approval of the UN Sanctions Committee, as the project is directly implemented by Hormozgan. ▪ Contract of local contractor and company signed in Sep. 2014, company did technical evaluation in Iran and provided procurement with technical report for UN Sanctions Committee.
Oil refinery: Replacement of existing barometric condenser with Plate Heat Exchanger (PHE)	▪ TFA with Abadan oil refining Co. signed on 16 July 2014 ▪ Technical Specification of project finalized. ▪ Internal public tender successful first after the third bidding with only one Bidder. ▪ Mission for technical evaluation of offers arranged.
Bricks: Monitoring and Control System in Hoffman kiln	▪ Eight companies announced interest for pilot, four proposals received by Sep. 2014, out of which only Ajor Sofal Izadi (Ati Morvarid Pardis) Brick Company has been awarded the direct local procurement as part of direct co-financing of their project.

Concerning the project component 5, UNIDO should provide US$ 1.5 mill from the GEF Grant, IFCO will mobilize US$ 2-3 mill. for the Revolving Fund for Industrial Energy Efficiency projects for the Islamic Republic of Iran.

A clear commitment of the Iranian Government for the persistence of the USD value of the GEF Grant is needed prior to decision for setting the Revolving Fund.

In the meanwhile, a framework for Revolving Fund administration is being developed. IFCO will find a solution on how to create the EE Revolving Fund in an Iranian Bank or an international bank. It has to be noted that IFCO should be careful that the bank is not part of the Banks that underlie the UN Sanctions. Furthermore, a technical working committee for technical and economical approval of projects should be assigned by IFCO with agreement of UNIDO for managing the revolving fund.

Details on achievements per project component, outcome, output, containing the quantified and time-bound indicators and targets can be found in Table 4.

Future reporting to GEF

Relevant SMART (especially measurable) Indicators and Target Indicators as they are contained in the Project Results Framework within the Monitoring and Evaluation system, should be reported to GEF in the future as it was done by the time of the MTR. This reporting can be included in UNIDO Annual Project Implementation Report (PIR) as done to date.

Contribution to achievement of Global Environmental Benefits (GEB)

Project outputs and outcomes directly contribute to the implementation of the GEF Focal Area on Climate Change, namely to fulfilling the requirements of the 'Kyoto Protocol' unanimously adopted by the United Nations Framework Convention on Climate Change (UNFCCC). The ultimate goal of the project is to reduce energy use related emissions of greenhouse gases (GHG) produced by the energy sector of the Islamic Republic of Iran, by generating cumulative direct GHG emission savings of 0.6 billion tonnes CO2eq. Cost of the resource for direct emission reduction will be 0.1 USD/tonne CO2eq. The project is very likely to contribute to the global environmental and energy benefit of reducing the energy consumption generated by fossil fuels and therewith contributing to the reduction of the CO2 emission and GHGs in the cases of the projects where the EnMS is being implemented, and the demonstration projects within the direct support to industry with their projects for industrial energy efficiency.

Catalytic and/or replicable role of the project

The demonstration projects that are part of Project Component 4 of this project are all with high level of replicability. Also, the implementation of the EnMS can be replicated at any other industry. The implementation of the EnMS is particularly important as preparation for the Certification of the companies with ISO 50001.

The project was effective at time of the mid-term review in the light of successful project implementation course to date, and the tangible results of delivered planned activities/inputs. Main outputs achieved by the time of the MTR are: implementation of the EnMS at eight companies, five demonstration projects for the direct support to industry of industrial energy efficiency projects are under implementation, diverse training on industrial energy efficiency are done, and energy audits have been performed. Yet it was difficult to assess some of the outputs, as the baseline and the outputs themselves will be changed to suit the veritable baseline for this project. Therefore, setting a new Project Results Framework with feasible outputs and target indicators to be reached within the timeline of the project and are based on a realistic baseline, as well as preparation of a new Work Plan based on the new Project Results Framework is essential for the further course of project implementation, and successful and effective implementation of this project.

3.3 Efficiency

The assessment of efficiency should answer whether the project is implemented in a cost-effective way and presents least-cost option. It needs to consider if the project was delayed, and if yes did the delay affect cost-effectiveness. Efficiency also considers adequacy of contributions of government as well as the national executing agency for project implementation.

This subchapter gives an overview on the extent to which the Project has produced the results (outputs and outcomes) within the expected time frame.

The progress of the project was assessed against the existing log frame and corresponding targets and indicators. The way the annual progress report is submitted, it does not indicate the progress against planned timeline of targets.

Details on the progress achieved so far per project component, outcomes and outputs taking into consideration the exact reaching of the targets is given in Table 6, as a table indicating the progress to date against the year target and end project target level for each of the outputs per component.

Table 5 presents the overall cost and financing with co-financing (planned and achieved) in US$ as it was planned for in the Project Document.

Table 5 Disbursement - overall cost and financing (including co-financing):

Project Components	**	Expected Outcomes	Expected Outputs	Grant Amount ($)	Co-financing ($)	Total ($)
1.Energy Agreements and other Legislation/ Drivers	TA	1. Liaise with Iranian Gov't re: National Targets and Milestones 2. Facilitate negotiations for series of Voluntary Energy Agreements with Industry	• Agreed National energy and CO2 saving targets to harmonize with project objectives • Series of bespoke Energy Agreements with Large energy-intense Industry in Iran • Series of group Energy Agreements with SMEs in "Big 5" sectors	280,000	610,000	890,000
2. Sharing of Good EE practices	TA	1. Dedicated Programme website 2. International Best Practice /Good practice EE advice 3. Other information sharing	• Building and maintaining porgramme website • Making BREF, International Benchmarks, GP Guidance and Case Studies, etc. - in Farsi • Advertising events,	200,000	360,000	560,000

Project Components	**	Expected Outcomes	Expected Outputs	Grant Amount ($)	Co-financing ($)	Total ($)
			publications, other programme activities			
3. Training, Benchmarking and other Events	TA	1. Energy management 2. Financial Appraisal 3. Other Conference/ Exhibitions/etc. 4. Equipment training/ capacity building	• 3 introductory EnMS training workshops to 100 managers in 50 large enterprises, ½ day each • 100 managers trained in financial appraisal (2 d workshop) • 600 staff trained in system optimization (approx 20 x 1 to 3 day workshops) • 20 Benchmarking and M&T workshops of 3-day duration • 20 conference/exhibitions linked to system optimization	250,000	315,000	565,000
4. Direct support to Industry	TA	1. Energy Performance benchmarking 2. Walk through energy audits 3. Detailed follow-up technical audits 4. Good practice case studies	• Benchmark reports of 5 sectors/ sub-sectors with large numbers of similar activities. Repeat benchmark after 2-3 years> 600 walk-through audit reports • > 400 “detailed study” reports • 60 x Iranian GP CS documents	1,630,000	4,152,500	5,782,500
	INV	5. Energy Audit Equipment 6. Metering and M&T 7. Pilot schemes/test rigs	• Pool of auditing equipment held & available through PO • Approx. 100 sites supported for EMS meters and software • Grants of (typically) $500k for 4 pilot schemes/ demos	810,000	3,562,500	4,372,500
5. Financial Support	TA	1. Make links to funding mechanisms	• Use Programme to link to and make use of other financial mechanisms	162,500	402,500	565,000

Project Components	**	Expected Outcomes	Expected Outputs	Grant Amount ($)	Co-financing ($)	Total ($)
	INV	2. Revolving (ESCO type) fund for EE support 3. CDM – support	• Accelerate EE equipment loans; pump primer for other programmes • Revolving fund self-sufficient and still supporting EE loans	1,567,500	5,082,500	6,650,000
6. Project management				665,000	665,000	1,215,000
			Total Project Costs	**5,450,000**	**15,515,000**	**20,600,000**

Source: Project Document

Expected amounts are those submitted by the GEF Agencies in the original project appraisal document. Co-financing types are grant, soft loan, hard loan, guarantee, in kind, or cash.

In the Project document, the GEF financing was planned to amount US$ 5,450,000. At the time of the Mid-Term Review, the total Executed Budget (A Term for Disbursements in UNIDO SAP) of the GEF Grant as being presented in the MTR GEF Reporting was US$1,558,322, which represents 29 percent of the GEF Grant spent to date, as shown in Table 6.

Table 6 UNIDO budget execution (GEF funding excluding agency support cost in USD)

Sponsored class (budget lines)	Name of the sponspored class (budget lines)	Executed Budget (Expenditures) 2012 (USD)	Executed Budget (Expenditures) 2013 (USD)	Executed Budget (Expenditures) 2014 (USD)	Executed Budget (Expenditures) 2014 (USD)	**Grand Total Executed Budget (Expenditures) to date (USD)**
1100	Staff & Intern Consultants	7817.4	107872.3	74610.32	13838.12	**204138.14**
1500	Project Travel		6363.16	46380.63	9465.71	**62209.5**
1600	Staff Travel	646	1758.96	638.81	878.82	**3922.59**
1700	Nat.Consult./Staff		43701.2	157752.9	109840.13	**311294.23**
2100	Contractual Services	425000	95023.59	402827.5	14983	**937834.09**
3000	Train/Fellowship/Study			18894.01		**18894.01**
3500	International Meetings		12428.8	23.59		**12452.39**
4500	Equipment		1950.98	3090.34		**5041.32**
5100	Other Direct Costs		3520.2	-883.7	-100.56	**2535.94**
Grand Total		**433463.4**	**272619.19**	**703334.4**	**148905.22**	**1558322.21**

Source: SAP database, February 2015

The amount of US$3,891,678 from the GEF Grant is left until project closure. The main reasons behind this are on the one hand that the main disbursements of the GEF Grant of US$1,567,500 is to be spent for creating the revolving fund (Project Component 5) which has not been started yet, and is planned as a last project component, and on the other hand the GEF Grant of US$2,440,000 for the Project Component 4 – Direct Support to Industry has not been spent yet for the four demonstration projects because of the delays of equipment

procurement due to the procedures of procuring equipment as a result of the UN Sanctions to Iran (more detailed elaboration is given in the chapter of Procurement). Additionally, in the new project logical framework the expected output from project component 4 on providing support to approximately 100 sites for EMS meters and software will be changed to suitable outputs on training or train or trainers on metering.

Concerning the co-financing issue, UNIDO budget and co-financing has no clear view on the co-financing over the years. Namely, the budget breakdown indicates the sourcing of the co-financing over project components, but it lacks information of co-financing per year. The Project implementation relies on co-financing as agreed between Project partners prior to project implementation.

The total financing and co-financing amount details at the time of the mid-term review are given in Table 7. At present, a total of 18 percent of the financing and co-financing amount have been spent, and the reasons behind are explained above.

Table 7 Total financing and co-financing in USD at the time of mid-term review

	Type	GEF Grant Planned (US$)	Co-Financing Planned (US$)	Actual Costs (US$)	Actual Costs (%)
GEF	Grant	5.450.000	_	1.558.322	29%
IFCO and Industry	Cash	_	7.700.000	2.045.954	27%
	In-kind	_	7.300.000	95.551	1%
UNIDO	Cash	_	30.000	30.000	100%
	In-kind	_	120.000	67.500	56%
Total		**5.450.000**	**15.150.000**	**3.797.327**	**18%**

Actual co-financing activities in cash and in in-kind by IFCO, Industry and UNIDO are being provided (different project partners finance and implement various activities), and details on co-financing are showed in Table 8 as actual co-financing and additional leveraged financing.

The co-financing planned in the project document amounted US$15,515,000. At the time of the mid-term review, the materialized amount of co-financing was US$2,239,005, which is 15 percent of the planned co-financing. The low materialized co-financing is due to missing data, especially on the in-kind co-financing from IFCO.

As soon as the new project results framework with the new outputs and indicators therefore will be in place, it will be possible to more precisely calculate the in-kind co-financing from IFCO. The cash co-financing of IFCO is provided through three projects: “Review and develop energy consumption standard of seven polymer production plants in various petrochemical industries”, “Develop energy consumption and energy efficiency standards of central utility units of petrochemical industries and oil and gas refineries”, and “Upgrading steam boiler efficiency in oil

and gas refineries through improved combustion and waste water management" amounting to US$7.7 million as stated in the Co-financing Letter from IFCO dated 7 March 2012.

For the contribution of cash and in-kind co-financing from industry, it must be noted that the same was not foreseen in the original project document, which is elaborated under project design.

Table 8. Detailed co-financing by IFCO, Industry and UNIDO per project component

No.	Project Component	Co-financing						Total Allocated (USD)	Cost Approved in Project Document (including the GEF Grant) (USD)
		IFCO		Industry		UNIDO			
		Cash	In-kind	Cash	In-kind	Cash	In-kind		
1	Energy agreements & other legistations	0	5.529	0	9000	0	0	**14.529**	**890.000**
2	Sharing of EE best practices	0	2.246	0	857	0	0	**3.103**	**560.000**
3	Training, benchmarking & other events	4.000	6.960	2154	17550	0	0	**30.664**	**565.000**
4	Direct Support to Industry	432.800	13.146	1.607.000	32.892	0	0	**2.085.838**	**10.155.000**
5	Financial support	0	6.300	0	1.071	0	0	**7.371**	**7.215.000**
6	Management & Monitoring	0	0	0	0	30.000	67.500	**30.000**	**1.215.000**
Total		**436.800**	**34.181**	**1.609.154**	**61.370**	**30.000**	**67.500**	**2.171.505**	**20.600.000**

Least cost option for the demonstration project solution

The implementation of the EnMS at eight demonstration sites, and the four projects for the direct support to industry were identified through an open and competitive process through a call for proposals. UNIDO instituted an adjudication committee consisting on UNIDO, IFCO representative and representatives of the private sector to select the projects to benefit from the grant. For the selected pilot project, a Co-Financing Letter was secured from the company, and they were sealed in the Project Document by GEF.

The mid-term review has concluded that all efforts were undertaken to ensure cost-effectiveness of project results both by UNIDO as IA, PMT and the national project counterpart IFCO. However, there is a need to calculate as soon as possible the contribution of IFCO and industries for the cash and in-kind co-financing to date using the new feasible indicators from the new Project Results Framework.

3.4 Assessment of sustainability of project outcomes

The assessment of sustainability of project outcomes at the time of the mid-term evaluation should explain how the risks to project outcomes will affect continuation of benefits during the project implementation, and if possible to assess, after the GEF project ends, including both exogenous and endogenous risks. Based on GEF evaluation policies and procedures, the overall rating for sustainability cannot be higher than the lowest rating for any of the individual components. Therefore the overall sustainability rating for this Project at the time of the mid-term evaluation is likely, which means that there are no risks that affect the dimension of project sustainability.

3.4.1 Financial risks

There was a clear co-financing commitment by IFCO that has partly materialized by now. The co-financing for the demonstration projects has partly materialized and will continue until project implementation ends at the sites. The GEF Grant disbursement has been low to date, and most of the GEF Grant expenditures are planned for project components 4 and 5. Even though to date the project expenditures are fairly low, there is no risk that the money will stay unspent until the project ends.

With the above said, there are no identified financial risks to sustainability, which leads to likely sustainability of finances.

3.4.2 Sociopolitical risks

Priority of the Government of the Islamic Republic of Iran is to increase the level of energy efficiency in their various high energy consumption industries, and to reduce the CO2 emissions in the atmosphere, and therewith contribute to GHG emissions reduction. Project stakeholders, including government officials, companies where EnMS projects are being implemented, and the broader public, have developed a strong sense of ownership of the projects interventions. The project has provided and is to provide targeted training and awareness raising on industrial energy efficiency to numerous concerned professional by now.

Therefore there are no risks at the time being that affect socio-political sustainability, which causes for the sociopolitical sustainability to be likely.

3.4.3 Institutional framework and governance risks

With the passing “The Act of modification of energy consumption pattern, number 1770” approved in Iran in 2011, and other supporting mechanisms that would promote Industrial Energy Efficiency in the Islamic Republic of Iran, such as constantly cutting the state subsidies for the industry, there no identified risks that affect institutional framework and governance sustainability, which leads to likely sustainability of institutional framework and governance of IEE in the Islamic Republic of Iran.

3.4.4 Environmental risks

No environmental risks connected to sustainability could be identified related with the project that may jeopardize sustainability of the outcomes, which means the environmental sustainability is likely to be achieved. Even more, some of the action plans from the implementation of the EnMS contribute to improvement of the environment in general.

3.5 Assessment of monitoring and evaluation systems and project management

This section assesses the M&E systems in place for the project. The M&E plan describes how the whole M&E system for the project works and includes indicators responsible for collecting them, what forms/tools will be used, and reporting schedules. The M&E plan includes the project logframe (project results framework), baseline reports, periodic reports, and other documentation such as minutes of meetings, documentation of activities etc..

M&E Design

The PD contains a project M&E plan, outlining specific M&E activities, responsible parties, budgets, and timeframes. It includes the logframe, the annual work plans as well as detailed progress and activity reports. The plan also includes and budgets for a mid-term review and a terminal project evaluation. The activities outlined in the M&E plan meet GEF minimum standards for M&E, and the budget of US$100,000 is sufficient, however rather low for a full-size project. The PD sufficiently identifies various review and evaluation processes, specific reporting requirements, and responsibilities. The budgeted M&E plan contains Key Performance Indicators (KPIs), however some of them have not been feasible to the real situation in Iran and could not have been measured in the course of project duration. The same should be improved during the continuation of project implementation.

M&E design included the Project Results Framework which includes some SMART indicators at outcome level. However not feasible indicators are provided for outputs due to the fact that setting of the targets was not made using a realistic baseline, which caused that the targets and indicators are not feasible and possible to be reached within the project duration. Furthermore, not all targets provided are consistent with the activities described and the baseline is not provided for all the targets. Therefore, a new baseline has to be set, and new feasible targets have to be set. The baseline in general was weak for this project.

M&E Implementation

The project has a functioning M&E system. The assessment showed that the Project Manager and Project Management Team (PMT) prepared very detailed reports that provide exhaustive aspects of the periodical achievements of the project with narrative links back to the outcomes, outputs and targets elaborated in the logical framework. Proper Monitoring and Evaluation procedures were followed by the Project Manager from Implementation Agency (IA) by writing very detailed and comprehensive Annual Project Implementation Reviews (PIRs) to GEF at outcome and output level. Both UNIDO PM and PMU performed oversight of the main activities especially in the phases of installation of demonstration projects and trainings. However, the work programme and project results framework have to be revised due to delay in certain project activities. It has to be noted that due to the fact that no indicators included for more detailed outputs or outcomes, and it is not clear how frequently it is up-dated nor how it informs further work or management.

Since the project implementation has started, the project is running smoothly, with the exception of the procurement delay due to UN Sanctions and some minor delays in the EnMS implementation at the eight project sites. The Mid-Term Review was performed almost as planned in the PD in March 2015. The Terminal Evaluation is planned for July 2017.

Taken into consideration the fact that there was no proper baseline set for the project, together with the existing project results framework that contains many unfeasible outputs and indicators, the implementation of M&E and use for adaptive management is on a moderately satisfactory level using the project results framework as it stands. In order to meet the minimum GEF requirements for M&E, first of all a new real-time baseline has to be set, followed by an adapted project results framework with feasible outputs and indicators at output level, as well as an adapted work plan has to be elaborated leaning on the new project results framework as soon as possible.

Budgeting and funding for M&E activities

The budget provided for M&E of US$100,000 at the planning stage was sufficient. Adequate funding has been provided for M&E activities during the project implementation, and the necessary monitoring activities have been undertaken, which aspect is very satisfactory.

Monitoring of long-term changes

At this stage, it is too early to comment on monitoring of long-term changes, and the project is still in the process of implementing the action plans coming from the implementation of the EnMS system in the Islamic Republic of Iran. For the direct support to industry, the project have not been implemented yet. There is an overall ownership of the project by various national institutions and the relevant Ministries of Foreign Affairs (as GEF Focal Point in Iran), Ministry of Oil with IFCO as a National Counterpart and Ministry of Energy with SABA within the Government of the Iran, as well as all the state and private industries included in this project.

With “The Act of modification of energy consumption pattern, number 1770” approved in Iran in 2011, and other supporting mechanisms that would promote Industrial Energy Efficiency in the Islamic Republic of Iran, such as constantly cutting the state subsidies for the industry. Furthermore, the Department of Environment as of 2016 will implement a project for measuring and monitoring all CO2 and GHG emission from industries all over Iran. Therewith, the Islamic Republic of Iran demonstrates the right direction in which the project is moving towards

embedding industrial energy efficiency as part of the national strategy, which is highly satisfactory towards monitoring of long-term changes.

Project management

Project management has been successfully carried out by the UNIDO Project Manager and Project Management Team (PMT) led by the National Project Coordinator (NPC) and the Technical Expert in the Islamic Republic of Iran. The Project Management Team (PMT) was established and placed within the UNIDO Field Office in the Islamic Republic of Iran. At the moment, PMT consists only of NPC and a Technical Expert.

While the project management unit was not in charge for financial management of the project (all payments and procurement were carried out through UNIDO, or initiated by UNIDO), this aspect did not obstruct project implementation. All resources required from UNIDO were provided in a timely manner. In the light of mid-term review evidence on project management, the project is seen as highly successful and satisfactory.

3.6 Assessment of processes affecting achievement of project results

3.6.1 Country ownership / drivenness

It was stated during the mid-term review and already elaborated in several sections of this mid-term review report, that the level of ownership of the Government of the Islamic Republic of Iran and local stakeholders is extremely high. The Iranian Fuel Conservation Company (IFCO) is the national executing partner for project implementation. A Project Steering Committee (PSC) consisting of representatives of government institutions and of stakeholders and beneficiaries that convenes on a regular basis is of key importance for success of the project. All the members of PMT, interviewed representatives of the Government Agencies and Ministries of the Islamic Republic of Iran and public institutions, stakeholders, and private sector representatives express strong and highly satisfactory ownership of their roles within this project.

3.6.2 Stakeholder involvement

Involvement of relevant stakeholders, sharing information and consultations is carried out on several levels within the Project. On a managerial and planning level, it is done within the Project Steering Committee (PSC), which is established to provide strategic guidance on the project implementation and facilitation of the coordination of various Government authorities, institutions and the industries. PSC is established with the participation of the key stakeholders and has a number of permanent members coming from numerous relevant stakeholders (Governmental institutions related to the scope of the Project). Overall, there is a very high level of stakeholder involvement in the project.

3.6.3 Financial planning

The Project has appropriate financial controls, that allows management to make informed decisions regarding the budget and allows for timely flow of funds. UNIDO manages the overall project budget and procures all services required, and as well timely prepares financial reports

to the GEF, in accordance to the established UNIDO rules and regulations and applicable GEF requirements.

However, only aggregated data according to Budget Line are available from the GEF Grant as project disbursements as a whole.

Financial audits were not made until this stage of project implementation. All the procurements for the demonstration projects and the trainings so far went smoothly and through the HQ as centralized procurement. More on procurement will be elaborated in the section Procurement issues.

UNIDO was responsible for financing and determination of means from GEF funding and this was done in a responsible, cost-effective and satisfactory manner. However, reporting and planning of the budget should be improved.

3.6.4 Co-financing and project outcomes and sustainability

The Project implementation relies on co-financing as agreed between Project partners prior to project implementation launch.

Although, actual co-financing activities are being delivered to a relatively low extent (different project partners finance and implement various activities), those are not appropriately reported and for some cash and in-kind co-financing no evidence exist. On other hand, the co-financing situation is clear as per source for the demonstration project, and it has been duly delivered for the implementation of the demonstration projects as per ToR and Procurement Contracts from the private and public partners. Details on co-financing are given in the chapter Efficiency.

At the time of the mid-term review, the materialized amount of co-financing was very low with US$2,239,005, from the planned US$15,150,000 at project closure.

3.6.5 Delays and project outcomes and sustainability

The project is being implemented according to plan to date. However, due to the procurement delays in the demonstration projects for direct support to industry as a result of the procedure with the UN Sanctions Committee, it is possible that the project needs to be extended, which cannot be foreseen for the time being. However, if this is the case, the mid-term review supports a project extension with a feasible deadline due to the lengthy procedures with the UN Sanctions Committee.

The implementation start in the PD was marked in August 2012, and the official launching of the project took place in October 2012. Therewith the Mid-Term Review was done as per PD in March 2015, and the Terminal Evaluation will accordingly take place in July 2017.

3.7 UNIDO's involvement and specific ratings

3.7.1 Preparation and readiness / Quality at entry (QAE)

Counterpart resources and adequate project management arrangements in place at project entry capacities of executing institution and counterparts were not properly considered when the

project was designed; partnership arrangements properly identified and the roles and responsibilities negotiated prior to project approval; project's objectives clear, but the indicators in the project logical framework are not feasible. With the baseline not being set properly, quality of entry and preparation and readiness in the phase of project design were rather poor.

3.7.2 Implementation approach

The implementation approach related to the Project complies with other approaches applied by UNIDO as it is part of Programme aimed at roll out of best practice industrial energy efficiency project implementation arrangements throughout the world.

Evidently, UNIDO uses a holistic approach that focuses not only on technical improvement, but also on improvement in policy, management, operations, and financing. To ensure sustainability, the Project focuses on developing and promoting a well-functioning market environment that will stimulate investments in industrial energy efficiency in the Islamic Republic of Iran. Thus, is provides replicability of the processes being developed and implemented within the Project.

The Project and its approach promote local ownership and capacity building using a combination of market push via policy and normative interventions including national energy management standards, and at the same time market development - pull through implementation of the EnMS – Energy Management Systems and their preparation for ISO 50001 Certification in certain industrial capacities in the Big-5 industries: Iron & Steel, Petrochemicals, Refinery, Brick and Cement Industries in the Islamic Republic of Iran, delivery of trainings and capacity building.

Furthermore, the implementation approach was a good example by giving the PMT overall project coordination responsibility through for carrying out day-to-day management, monitoring and evaluation of project activities with a close collaboration and consultation with the National Executing Counterpart the Iranian Fuel Conservation Company (IFCO). This has helped to develop a strong ownership of the project, which, together with the committed support from UNIDO's Project Manager led to a highly successful project implementation by now.

3.7.3 UNIDO's supervision and backstopping

UNIDO staff provides quality support and advice to the project coming from different UNIDO HQ departments and also hired international consultants bringing the best available knowledge and practice, providing the right staffing levels, continuity and frequency of field visits for the project, identifying problems in a timely manner and providing appropriate response. The rating for UNIDO's supervision and backstopping is primarily based on regular presence of the Project Manager from IA in the country at crucial times of project implementation. It must be noted that the Project Manager did provide regular and dedicated in-country contribution and guidance to the PMT, especially in the time of the actual implementation of the demonstration projects, which is a highly satisfactory aspect, and theproject success until now is due to UNIDO's teamwork and support to the PMU.

3.8 Project coordination and management

The national management and overall coordination mechanisms seems to be efficient and effective. All parties are very aware of their roles in the Project and act within their appropriate responsibilities.

UNIDO is implementing the Project in close consultation with IFCO and according to the established UNIDO rules and regulations and applicable GEF requirements. The role of UNIDO is to maintain the oversight on the project implementation, manage the overall project budget, procure all services required, monitor the project implementation, timely prepare financial and progress report and submit them to the GEF and the Project PSC, as well as organize mandatory and non-mandatory evaluations. It also, it supports the Project PSC and the PMT in co-ordination and networking with other related initiatives and institutions in the country. UNIDO manages the implementation by an appointed Project Manager, and as well by mobilizing services of its other technical, administrative and financial branches at UNIDO Headquarters and the PMT in the Islamic Republic of Iran, when needed.

UNIDO staff provides quality support and advice to the project, providing the right staffing levels, continuity and frequency of field visits for the project, identifying problems in a timely manner and providing appropriate response.

The roles and responsibilities of all Project partners have been identified from the beginning and outlined in the project design (see Figure 1 of this MTR: Project implementation arrangements). Each of the partners is aware of its responsibilities and acting appropriately.

The PSC provide strategic guidance on the project implementation and facilitates the coordination of various Government authorities, institutions and the industries. To ensure sustainability, strategic relevance and appropriate national coordination, the PSC is established with the participation of the key stakeholders with a concrete mandate.

A Project Management Team (PMT) manages the project implementation on a daily basis. The PMU is headed by the national project coordinator (NPC). There is also a Technical Expert responsible for the successful implementation of the EnMS in the eight companies. The management team operates in a close network of the direct beneficiaries and involved Iran institutions and other project stakeholders, as well as the private sector involved in the industrial energy efficiency sector in the Islamic Republic of Iran. The project management team, under the guidance of UNIDO reports to the Project Steering Committee and work in close coordination with the National technical staff representing partners' organizations.

There were no comments or issues on the overall project management by UNIDO or on the project execution identified by the PSC or during the interviews in the evaluation period.

Project management has been highly successfully carried out by the UNIDO Project Manager and Project Management Team (PMT) led by the National Project Coordinator (NPC) in the Islamic Republic of Iran.

3.9 Assessment of gender mainstreaming

Gender was not considered in the project design. Gender balance is not present in the Energy Efficiency Sector in Iran. The focus sectors for the project are dominated by men, as such a specific gender aspect of the project is not possible to be set.

However, instances of positive gender mainstreaming are that the Project Management Team consists of two women: the National Project Coordinator and the Technical Expert. Additionally, two National Experts are women: the expert for communication and the national EnMS (Energy Management System) expert. Also, the Project Representative from SABA is a woman.

3.10 Procurement

UNIDO is accountable to the GEF for the management of the funds of the Project, implementing the Project according to the established UNIDO Procurement rules and regulations and applicable GEF requirements. This means managing the overall project budget and procuring all services required, timely preparation of appropriate financial reports and submission to the GEF and the Project Steering Committee.

For the three demonstration projects (GEF Grants of US$ 500,000 were provided each for ESCO Steel Company and for Abadan Oil Refinery, and a Grant of US$ 351,133 for Hormozgan Cement Plant) from the direct support to industry (Project Component 4) there was a procurement including a competitive bidding process. However, the procurement process is still ongoing due to delay because of waiting on Approval given by the UN Sanctions Committee prior to procuring equipment for the Islamic Republic of Iran.

There was a direct subsidy of US$15,000 paid through UNIDO Field Office to two companies from the Bricks sector for implementing small scale energy efficiency projects.

Procurements related to carrying out training are also done centrally by UNIDO Procurement (lecturers, facilities, stationary, and other organizational issues) and these are solicited by the PMT locally and then passed on to project management within UNIDO HQ to review the offers, verify any inconsistencies, ensure at least three offers have been selected and make the final recommendation. Then a purchase order for the winning bidder is being issued.

Procurement is extremely difficult due to UN Sanctions to Iran. On the one hand there is lack of bids, and on the other hand there is very long procedure in order to secure an approval from the UN Sanctions Committee for procuring equipment in Iran. As mentioned in the recommendations, in order to simplify obtaining the approval of the UN Sanctions Committee, UNIDO should enable the following steps:

i. Arbitrate a direct partner in the Technical UN Sanctions Committee with whom the Project Managers at UNIDO can communicate directly in order to facilitate avoiding of communication gaps and simplify process of receiving the approval.
ii. Couple with IAEA on their own experience in approving the Projects / Equipment sent to Iran.

iii. Engage the UNIDO New York Office if feasible to facilitate and speed-up the process of obtaining the approval of the UN Sanctions Committee once the whole technical documentation has been sent to the UN Sanctions Committee.

iv. Establish a platform for collaboration between the Project Managers dealing with projects in countries with UN sanctions for sharing experiences and best practices with the ultimate goal being to speed-up the obtaining of the approval of the UN Sanctions Committee for procuring equipment for the Islamic Republic of Iran.

4. Conclusions, recommendations and lessons learned

4.1 Conclusions

The Project is well on track with a highly satisfactory progress to promote energy efficiency in five high energy consuming industrial sectors: Iron & Steel, Petrochemicals, Refinery, Brick and Cement industries in the Islamic Republic of Iran by adopting a national framework for Energy Management Standards (EnMS). This project is an example for successful project implementation by being a major pioneer in promoting industrial energy efficiency with such broad scope at once in the Islamic Republic of Iran. The fact that the Energy Management Systems (EnMS) is being successfully implemented in eight companies within the four largest energy intense industries in Iran: Iron & Steel, Petrochemicals, Refinery and Cement industries, and five other demonstration projects with three larger, and two smaller scale industrial energy efficiency projects will be supported by direct subsidies from the GEF Grant within this project shows the large opportunity to tackle the subject of industrial energy efficiency in Iran to contribute to long-term changes for energy savings and conservation and reaching the goals of CO2 and GHG reduction.

The four GEF key strategic indicators for this project were: cumulative energy saved, cumulative CO2 emissions (and therewith automatically GHG reduced) avoided, energy savings in USD (at international prices) and million of USD of EE technology investments. Project implementation for reaching all of these four indicators have been started during the realization of the Action Plans deriving from the implementation of the EnMS and their measurement will be enhanced in the implementation continuation of the project.

It might happen that the project implementation is likely to take longer than planned, mainly due to UN Sanctions regulations. For the time being it is unlikely to foresee if a project extension will be needed, but it should be noted that this mid-term review will support a project extension due to the reasons mentioned above.

The original project design included many unrealistic and overly optimistic targets based on a weak baseline, and the project document including the project results framework need to be amended. The management has displayed flexibility and project design amendments is likely to result in a good cohesive project. The project “Industrial Energy Efficiency in Key Sectors in Iran” offers a clear added value for the industry, for the country to reach GEBs (Global Environmental Benefits) and has a great potential for replicability.

The project is fully relevant to UNIDO by promoting green and clean energy efficient technologies, and to the national energy priorities, policies and strategy of the Government of the Islamic Republic of Iran, as well as to the GEF focal area of climate change and SP-2 - Promoting energy efficiency in the industrial sector.

4.2 Recommendations

Based on the evaluation and findings of this report, the evaluation team prepared several recommendations that can contribute to the achievement of the Project outcomes and outputs and the overall project objective to develop and promote a market environment for investments in mini-grids based on small hydropower sources to augment rural electrification in the Islamic Republic of Iran. The recommendation will be separated according to the designees into: recommendations to the Government of the Islamic Republic of Iran and Project Management Team (PMT) and recommendations to UNIDO.

General Recommendations

9. A realistic Baseline for the outcomes, outputs and targets needs to be set for the purpose of this in the Islamic Republic of Iran where this was not the case with the present Baseline indicators.
10. The Project Results Framework (Outcomes, outputs and / or indicators) should be changed and adapted with feasible indicators that would match the present baseline situation for the subject of Industrial Energy Efficiency in the Islamic Republic of Iran.
11. Especially due to the difficulties with the UN Sanctions Committee, project extension can be considered, if it would be required and feasible.
12. UNIDO and IFCO should create a network between the EnMS pilot companies in order to share best practices between them and therewith ensure the sustainability and replication of the project.
13. Promote Government to Government transfer of knowledge on EE policies and legislative.
14. Sharing of best practices, case studies experiences and exchanging of Action Plans for Energy Efficiency and for implementing the EnMS system with other countries. Focus on training on benchmarking through aligning the companies on UNIDO's benchmarking methodologies, rather than producing only benchmarking reports.
15. Larger spectrum of stakeholders; industries, policy makers, financial institution, sector association, SABA, etc. should be integrated in the project in order to make mutual use of the data present at the project stakeholders' in order to gain applicable and effective outcomes.
16. Dissemination of project achievements and success and EE information in a form of short movie and / or brochures to a broad public in Iran.

Recommendations to UNIDO

4. UNIDO should initiate a Training of Trainers (ToT) training on benchmarking and energy audit with IFCO.

5. UNIDO should initiate Training of Trainers (ToT) workshop together with SABA (maybe at their training center in Tabriz) with international experts for metering and M&T instead of buying the metering equipment which already exist (Project component 4).
6. Concerning the approval of the UN Sanctions Committee, UNIDO should enable the following steps:
    v. Arbitrate a direct partner in the Technical UN Sanctions Committee with whom the Project Managers at UNIDO can communicate directly in order to facilitate avoiding of communication gaps and simplify process of receiving the approval of UN Sanction Committee for procuring of equipment.
    vi. Couple with IAEA on their own experience in approving the Projects / Equipment sent to Iran.
    vii. Engage the UNIDO New York Office if feasible to facilitate and speed-up the process of obtaining the approval of the UN Sanctions Committee once the whole technical documentation has been sent to the UN Sanctions Committee.
    viii. Establish a platform for collaboration between the Project Managers dealing with projects in countries with UN sanctions for sharing experiences and best practices with the ultimate goal being to speed-up the obtaining of the approval of the UN Sanctions Committee for procuring equipment for the Islamic Republic of Iran.

Recommendations to the Government of the Islamic Republic Iran represented through the Executing Partner Iranian Fuel Conservation Company (IFCO) and PMT:

5. IFCO should receive industry's and bank's feedbacks on EE financial scheme for the EE Revolving fund.
6. IFCO should organize a workshop and invite industries/ banks to collect their ideas on the EE Revolving fund.
7. IFCO should match the outcomes and outputs of their three projects calculated as cash co-financing to the outcomes and outputs of the Project Logical Framework.
8. IFCO should report specific information on the in-kind co-financing to the Project Steering Committee (PSC).

4.3 Lessons learned

The purpose of lessons learned is to bring together any insights gained during the project that can be usefully applied in future projects. Capturing lessons learned from the project implementation may result in more effective and efficient future roll out of project activities and organizational learning. Capturing lessons learned and turning that hindsight into best practices will achieve far greater long-term project success. At this stage will be mentioned also the best practices that were applied during this project, which can be captured and possibly replicated within UNIDO and broader.

The following best practices can be learned from this project:

1. In this project, best practice was the introduction of the Basecamp as a communication and knowledge sharing platform for the large network of National and International project experts for the impelementation of Energy Managment System (EnMS).
2. The very close work of the National Experts between each other, within and outside their teams, as well the successful collaboration with the industrial demonstration sites for the goal the EnMS implentation.

The following lessons can be learned from this project:

1. Involvement of stakeholders from the inception phase and conducting due diligence of project stakeholders during the project initiation is utmost important, especially in order to understand the needs of the project developers, stakeholders and beneficiaries, and to ensure and create a strong sense of ownership of the project as key to successful project implementation.
2. Timely integration of comments and recommendations of all project stakeholders is crucial for setting a veritable project baseline, based on what realistic Project Document with Project Results Framework with feasible outputs, outcomes and targets can be set.
3. Clear streamlined processes with detailed instructions for approval of projects and/or project component by the UN Sanctions Committee are necessary for flawless project implementation in countries affected by UN Sanctions.
4. Raising awareness and disseminating information for the Project and the importance and relevance of the subject of Energy Efficiency as one of Iran‘s priorities, especially in State Companies before project implementation start is of crucial importance for the ownership and collaboration within the project.
5. Training sessions of international consultants should be simultaneously translated in Farsi because of language barriers for an easier and active participation of energy managers.

Annex A: Terms of reference

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Terms of Reference

Independent Mid-term review of the UNIDO Project:

Industrial Energy Efficiency in Key Sectors in Iran

UNIDO Project Number: GFIRA12001
UNIDO SAP ID: 120506
GEF Project Number: 3540

FEBRUARY 2015

Contents:

I. Project Background and Overview

1. Project Factsheet

Project Title	**Industrial Energy Efficiency in Key Sectors in Iran**
GEF ID	**3504**
UNIDO ID (SAP Grant Number)	**GFIRA12001**
Region	
Country(ies)	**Iran (Islamic Republic of)**
GEF Focal Area(s) and Operational Program	**Climate Change** **CC-2 Promoting energy efficiency in the industrial sector**
GEF Agencies (Implementing Agency)	**UNIDO**
Project Executing Partners	**Iranian Fuel Conservation Company (IFCO)**
Project Size (FSP, MSP, EA)	**FSP**
Project CEO Endorsement/Approval Date	**9 August 2012**
Project Implementation Start Date (PAD Issuance Date)	**10 October 2012**
Original Expected Implementation End Date (indicated in CEO Endorsement/Approval document)	**31 July 2017**
Revised Expected Implementation End Date (if any)	
Actual Implementation End Date	**31 July 2017**
GEF Grant (USD)	**5,550,000**
GEF PPG (USD) (if any)	**100,000**
UNIDO Inputs (USD)	**150,000**
Co-financing (USD) at CEO Endorsement	**15,550,000**
Total Project Cost (USD) (GEF Grant + Co-financing at CEO Endorsement)	**20,850,000**
Mid-term Review Date	**30 December 2014**
Planned Terminal Evaluation Date	**31 July 2017**

Source: Project Document

2. Project Summary

The project: “Industrial Energy Efficiency in Key Sectors in Iran”, UNIDO ID: GFIRA12001 (SAP ID 120506), GEF ID Number: 3540 has the objective to promote energy efficiency in five high energy consuming industrial sectors (Iron&Steel, Petrochemicals, Refinery, brick and cement) by adopting a national framework for Energy Management Standards (EnMS).

This programme is to make a significant contribution towards Iran’s long-term energy efficiency (EE) strategy, which aims to reduce relative energy consumption across all industrial sectors by 20% by 2024/5 compared with 2008 as the base-year.

The project aims to produce a step-change in industrial Energy Efficiency (EE) in Iran, which is facing challenges developing an energy policy that will deliver a sustainable energy consumption pattern. Between 1970 – 2000, energy consumption in Iran rose almost eight-fold, from 90 million barrels oil equivalent (mboe) in 1971 to over 700 mboe in 2001. In the same period, the annual energy consumption growth rate was estimated to be 7.8% (Assali, 2003). This trend has continued since 2001, with the major contributory factors being:

- A high growth rate in usage of electric energy in the domestic and commercial sector.
- An increase in energy consumption in the transport sector.
- An above average industrial energy intensity.

Gas exchanged oil use for the generation of electricity in Iran, where all the “Big 5 (Iron & Steel, Petrochemicals, Refineries, Cement and Brick Industries)” new and many of the existing factories are obliged to have their own (subsidized) gas fired electrical generation plant, being environmental friendlier, however, year-on-year increase in fossil-fuel energy consumption is not sustainable. Secondly, energy usage in Iran is disproportion to the development of economic productivity and there are plans for substantial growth across most sectors over next 5-10 years with the Iranian Government has set itself an ambitious target of a 6% year on year growth across all key industrial sectors, which means increase in cumulative overall output of 270% over 2007/8 production over a 17 year period, by 2025.

The revised figure for the Iranian total industry energy is 437 TWh. Iran is recognized as having an above average industrial energy intensity.

The Iranian Government recognized the challenges and the need for investment in energy savings as well as increasing recognition of environmental responsibilities establishing a “top down” target to reduce the energy and carbon intensity of the “Big 5” Iranian Industry sectors by 20% by 2025. This is expressed as MWh per unit output, when compared against a recent Base Year (current using 2007/8).

There is a major barrier to financing and implementing energy efficiency (EE) options: the energy subsidy. Currently, energy prices in Iran are artificially low for: gas, oil and electricity. Solid fuel – coal and coke – is not subsidized.

The proposed project aims to accelerate the uptake of EE by setting up voluntary energy agreements with industrial sectors, providing a framework for National Energy Management Standards, assisting in capacity building through training, developing targets, providing benchmarks and most importantly, by identifying technology

improvement options to these high energy intensive industrial sectors. Energy Management Systems (EMS) has proven to be an effective tool for enterprises in other countries. Typically they raise the annual efficiency improvement by 1-2 percentage points over a period of many years.

Calculation of Global Environmental Benefits

Overall GHG reduction effect

Direct reductions

The reductions that can be attributed to this project are 1.2 billion t of CO2eq out of which **0.6 billion t of CO2eq can be directly attributed to the incremental impact of the GEF project.** This figure is derived by assuming a 3% annual improvement in energy efficiency for a period of 10 years for the Big 5 industries (Iron&Steel, Petrochemicals, Refinery, brick and cement). The figures are calculated as an average per factory per sector per year and shown in the table below.

Sources of reduction	**Emission reductions (Mt CO_2)**	**GEF Contribution factor**	**Total (MtCO_2)**
Direct	**0.33 billion**	1	0.33 billion
Direct beyond the project	**0.33 billion**	4	**1.34 billion**
Indirect – top down	20.56 billion	0.4	**8.22 billion**
Indirect – bottom up	0.33 billion	4	**1.34 billion**

Project outputs, outcomes, impacts and benefits

There are many outcomes from the project. Four key indicators have already been discussed. These are: cumulative energy saved, cumulative CO2 emissions avoided, $ energy savings (at international prices) and $M of EE technology investment. Projected savings and investments brought about by these are summarized below:

	Units	Savings/year (Mar 2016)	Cumulative (Mar 2016)	Savings/year (Mar 2025)	Cumulative (Mar 2025)
Energy	GWh	30,259	58,266	136,324	813,890
Cost savings[1]	$M	1,210	2,331	5,453	32,556
EE investment[2]	$M		3,631		16,359

[1] using a nominal value $40/MWh

[2] all investments (including that not influenced by the Programme), calculated from the estimated value of annual energy savings for that year and assuming a nominal 3 year payback for average investment

- Energy savings represent indigenous fossil fuel reserve savings. They equate to savings of 500 million m3 gas plus 5 million m3 oil by 2016, and 7,000 billion m3 gas and 70 million m3 oil by 2025.
- Reduced dust, NOx, SOx, fugitive CH4 and other emissions, plus wastes arising: to land and water.
- Consumable item losses, such as metal, raw materials, etc will be reduced.

The project supports the GEF-4 climate change strategy priority 2: Energy Efficiency in Industry, through promoting the deployment and diffusion of energy efficient technologies and practices in industrial production and manufacturing processes by covering a wide spectrum of the energy systems in industrial manufacturing and processing, including combustion, steam, process heat, combined heat and power, compressed air, motors, pumps and fans.

Additionally, the project seeks to:

- Remove barriers to energy efficiency,
- Develop and transform markets for energy so they grow and operate efficiently towards a financially competitive but simultaneously less carbon intensive path, and
- Reduce the Global environmental impact of Iran, in particular through reduced CO2 emissions.

For Iran the industrial sector accounts for 45% of GDP. In 2010 the start of the removal of energy subsidies planned by the Iranian Government. Without any intervention, an increase in energy costs is likely to have an adverse effect on Iranian industry, and energy savings is important to keep control of costs and to keep the industries competitive.

The project is expected to generate cumulative direct GHG emission savings of 0.6 billion tonnes CO2eq. Cost of the resource for direct emission reduction will be 0.1 USD/tonne CO2eq.

The project is funded through a GEF grant, amounting to USD $5,550,000, a UNIDO contribution of USD 150,000; and the counterparts' co-financing of 15,150,000USD, which amount to total project budget of USD 20,850,000. Co-financer is the Iranian Fuel Conservation Company (IFCO).

The project implementation started in October 2012 and the initial project closing date is planned for July 2017.

An independent mid-term evaluation for this project was foreseen in the project document as part of the Budgeted Monitoring and Evaluation Plan, with the purpose of conducting a systematic and impartial assessment of the project in line with UNIDO and GEF Evaluation policies. The mid-term evaluation is planned to take place in February 2015.

3. Project Objective

The project aims to make a significant contribution towards Iran's long-term energy efficiency (EE) strategy, which aims to reduce relative energy consumption across all industrial sectors by 20% by 2024/5 compared with 2008 as the base-year.

Along with the growing recognition for environmental stewardship, the Energy Subsidy - which currently means that natural gas, oil and electricity prices are very low compared with International market prices – is to be phased out. Therefore, there will be substantial cost-saving benefits to Industry by taking EE action and investment, and those that pre-empt the phasing out of the subsidy will be better placed to deal with the potential implications of rapid rises in energy costs.

Furthermore, the project should accelerate the uptake of EE across the 5 key industrial sectors - Iron & Steel, Petrochemical, Refinery, Brick and Cement - that collectively consume 71% of Iranian industrial energy by:

- Setting up voluntary energy agreements with industrial sectors,
- Providing a framework for National Energy Management Standards (EMS),
- Assisting in capacity building through training,
- Developing targets, providing benchmarks,
- Identifying technology improvement options to these high energy intensive industrial sectors,
- Sharing of good EE information via a dedicated web-site providing benchmarking, good practice advice, Iranian Case study examples of EE investments, and others, and
- Introducing through this project an energy-saving loan scheme, namely a "revolving" EE fund, as a means of encouraging the most appropriate financial mechanisms for encouraging EE investment in Iran.

This project will help accelerate the uptake of EE and make substantial energy cost savings (whilst simultaneously reducing Iran's CO2 emissions and freeing up indigenous gas and oil for export), by working closely with key Iranian Government Ministries and Bodies, as well as with and other important National stakeholders, to achieve these aims through a variety of EE mechanisms described above.

The project will focus on the five key industrial sectors: Iron&Steel, Petrochemicals, Refinery, brick and cement. These sectors are projected to undergo a large year-on-year growth, of 6% pa, over the same time frame. There is already considerable investment in place to meet these growth targets; Iran has recently built, expanded or is currently building/ expanding across all sectors.

The objective of the project is to promote energy efficiency in five high energy consuming industrial sectors (Iron&Steel, Petrochemicals, Refinery, brick and cement) by adopting a national framework for Energy Management Standards (EnMS).

The project entailed five project components:

Project Component 1 (PC1): Within this project component **"**Energy Agreements and other Legislation/ Drivers" the project should liase with the Iranian Government regarding national targets and milestones, and negotiations for series of voluntary energy agreements with industry should be facilitated.

PC1 contains the following three outputs:

1. Agreed National energy and CO2 saving targets to harmonize with project objectives
2. Series of bespoke Energy Agreements with Large energy-intense Industry in Iran
3. Series of group Energy Agreements with SMEs in "Big 5" sectors

Project Component 2 (PC2): "Sharing of Good Energy Efficiency practices" through preparing a dedicated programme website, practice energy efficiency advice of international best practices, and other information sharing with the following outputs:

1. Building and maintaining porgramme website,
2. Making BREF, International Benchmarks, GP Guidance and Case Studies, etc. - in Farsi, and
3. Advertising events, publications, other programme activities.

Project Component 3 (PC3): "Training, Benchmarking and other Events" through energy management, financial appraisal, other Conference/ Exhibitions/ etc., and equipment training/ capacity building with the following outputs:

1. 3 introductory EnMS training workshops to 100 managers in 50 large enterprises, ½ day each
2. 100 managers trained in financial appraisal (2 d workshop)
3. 600 staff trained in system optimization (approximately 20 x 1 to 3 day workshops)
4. 20 Benchmarking and M&T workshops of 3-day duration
5. 20 conference/exhibitions linked to system optimization

Project Component 4 (PC4): "Direct support to Industry" through energy performance benchmarking, walk through energy audits, detailed follow-up technical audits, and good practice case studies. Furthermore, energy audit equipment will be provided, metering and M&T will be done, and pilot schemes/test rigs will be made with the following outputs:

1. Benchmark reports of 5 sectors/ sub-sectors with large numbers of similar activities. Repeat benchmark after 2-3 years >600 walk-through audit reports,
2. >400 "detailed study" reports,
3. 60 x Iranian GP CS documents,
4. Pool of auditing equipment held & available through PO,
5. Approximately 100 sites supported for EMS meters and software, and
6. Grants of (typically) $500k for 4 pilot schemes/ demos.

Project Component 5 (PC5): "Financial Support" will be done through making links to funding mechanisms and revolving (ESCO type) fund for Energy Efficiency support with the following outputs:

1. Use Programme to link to and make use of other financial mechanisms,
2. Accelerate EE equipment loans; pump primer for other programmes, and
3. Revolving fund self-sufficient and still supporting EE loans.

4. Project Implementation Arrangements

Fuel Conservation Company (IFCO)
The Iranian Fuel Conservation company (IFCO) is a subsidiary of National Iranian Oil Company (NIOC) established in 2000 with the mission to regulate the fuel consumption in different sectors through review and survey of the current trend of consumption and executing conservation measures nationwide.

IFCO are responsible for the gathering of energy use data from the Iranian oil industries and this is currently being expanded to all industries in the country. IFCO has the following aims as part of its links to Government:

- Implementing energy conservation in industry,
- Enhancing public awareness in energy efficiency and fuel conservation by publishing books, magazines and through advertising campaigns,
- Enforcing fuel conservation measures,
- Producing high quality and efficient home appliances and fuel consuming system,
- Assisting research institutes and universities technically and financially to hold energy management training courses for government and private sectors,
- Providing comprehensive programs of energy conservation in transportation systems, and
- Providing disciplinary measures to support public conservation culture.

IFCO was to undertake energy audits in energy intensive industries and have undertaken 180 to date. They also have a major role in assessing if these companies are meeting the standards set by the Iranian National Standard and Industrial Research Organization. This role of auditing will be expanded through the Programme as it is seen as a very important part of the work. The expansion of this work will be supported through the greater knowledge of energy savings opportunities linked to the support of international experts and a tool kit of useful auditing equipment which will bring more focus to the existing work.

IFCO is to play a large part in the GEF/IFCO/UNIDO programme as they will provide significant financial ($5 M cash + $4 M 'in kind') and technical supporting role. It is essential that good liaison is developed between the PMT to ensure there is no cross-over of activities and each programme complements and supports the other. The organization is to play a large role in the dissemination of the Programme outputs as they already have a strong network through their current activities.

Industry Sector Roles and Responsibilities
The Industrial sector trade bodies representing the "Big 5" Sectors are seen as key Stakeholders for this programme for a number of reasons, including:

- They will facilitate access/ outreach to all major (and many minor) industrial enterprises in Iran – vastly improving the programme's "gearing" (ratio of effort to reward) in its efforts to attract industrial enterprises to the Programme;
- Improve the credibility/ understanding of the Programme's aims and objectives;
- Help with the Energy Benchmarking exercises: Provide contact details of key people/ Organisations, help chase non-respondents, sanity check energy and production data provided by each site, produce the Benchmark report and disseminate findings;
- Identify sites that would most likely benefit from a "walk-through" audit;
- Act as a focal point for the Pilot-scale R&D work;
- Act as a focal point for the Case Study report write-ups; recognizing potentially sensitive information;
- Participate in the EnMS and System Optimization training exercises.

Their potential contribution to the Programme is substantial; without their co-operation and contribution, the Programme would have only a fraction of its intended impact.
The key Trade Associations include:

- Cement: ACIE - Association of Cement Industry Employers
- Petrochemicals: NPC – National Petrochemical Company
- Refineries: NIORDC - National Iranian Oil Refining and Distribution Company
- Steel: IMIDRO - Iranian Mines & Mining Industries Development and Renovation Organisation
- Bricks – no National Body, largely represented by local Groups. For programme, has been represented by Asia Watts

Advisory committee
To secure a constructive stakeholder dialogue throughout the project an Advisory Committee will be formed consisting of the Ministry of Mines, Ministry of Energy, National Iranian Oil Company and other representatives from relevant ministries, and business associations with interest in industrial energy efficiency, project development and finance. The main role of the Advisory Committee will be to provide advice and feedback on the project design and support implementation during operations with policy support and by facilitating key partnerships across the market. The Advisory Committee also provides a forum for the advancement of sustainable energy finance in industry. The Advisory Committee members typically play important roles in promoting and sustaining a favorable policy environment for investments.

Ministry of Mines & Industry
Play a major role in the liaison with industry in Iran. A meeting with representatives of the Ministry has been held during the programme development stage. They have a leading role in research of equipment to be used and recommended to the intensive energy sectors that the programme will focus its work toward. It is seen as important to have a good working relationship with the ministry and during the programme inception work will be undertaken to form strong links.

Other stakeholder involvement
Through the project development stage of the UNIDO project team have engaged with local stakeholders through meetings at representative's offices in Iran. Some of the following organizations have been engaged during the programme development and have also attended stake holders meeting:

- Ministry of Oil
- Department of the Environment
- SABA
- Ministry of Information, Technology and Communication
- Ministry of Electrical Power

All of the above mentioned Government offices have a role to play in the rolling out of the Iranian Energy Efficiency strategy and, for this reason, all potentially have a part to play in the GEF/IFCO/UNIDO Programme.

PROJECT IMPLEMENTATION ARRANGEMENT: The successful implementation of the programme depends to a high degree on the effective Organization of the following aspects:
A. Effective programme oversight and management;

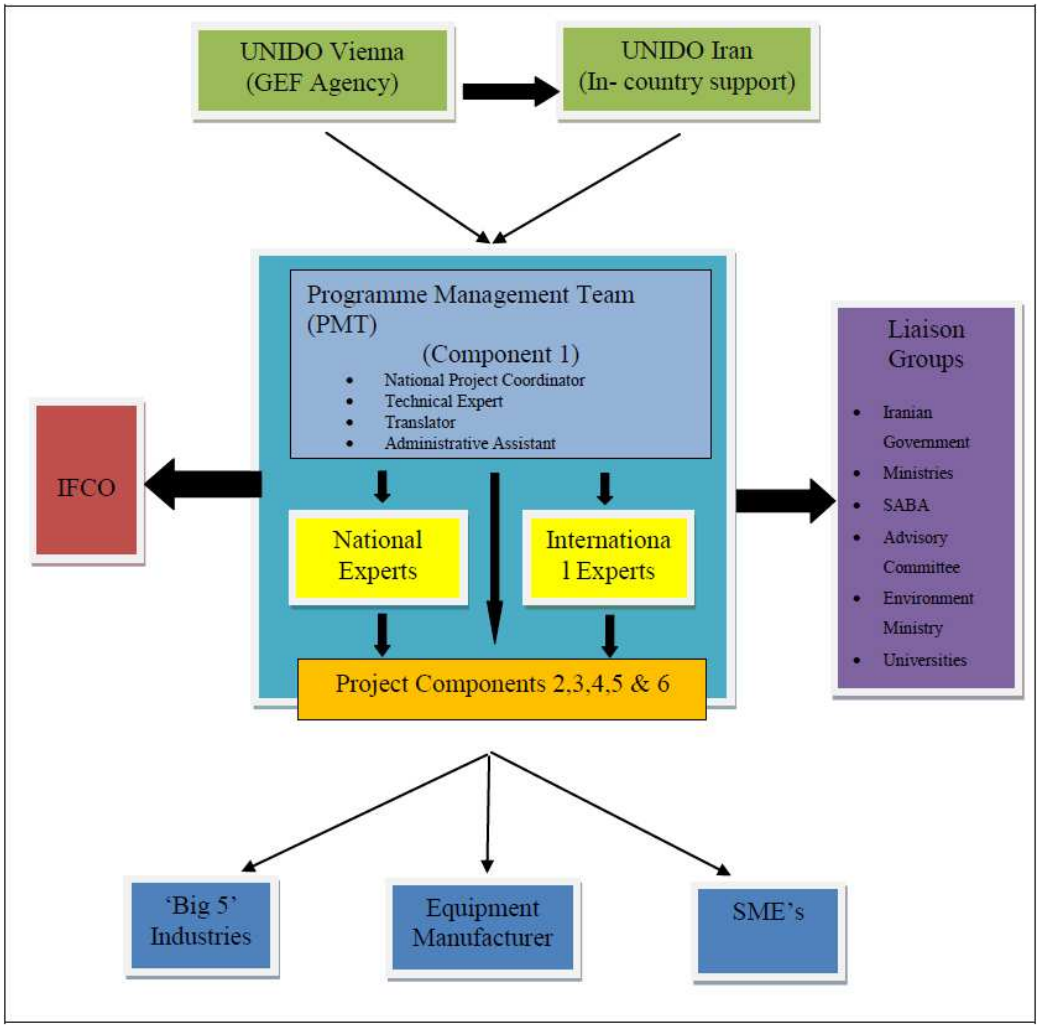
B. Successful liaison with the Iranian Government and in particular the Ministries of Mines & Industry and IFCO who will be responsible for the Iranian Government Energy Efficiency Programme.
C. Develop good cooperation with management of participating enterprises and business associations;

Although the programme is complex and is divided into six components, all are all closely related. Therefore a central project management structure is proposed as depicted in the following chart.

It is essential for the Programme Management Team (PMT) to complement the International Experts with Iran counterparts who will function as deputies of the international experts. The combined expertise and experience of the team will facilitate management and communication with the wide range of Iran organizations that are targeted by the programme. It also provides the transfer of knowledge of international practices to the Iran experts.

This structure allows for a strong integration of the implementation of the different components and provides a central focal point for the Iran Government.

Figure 1: Project Implementation Arrangements



5. Budget Information

a) Overall cost and financing (including co-financing):

Project Components	**	Expected Outcomes	Expected Outputs	Grant Amount ($)	Co-financing ($)	Total ($)
1.Energy Agreements and other Legislation/ Drivers	TA	3. Liaise with Iranian Gov't re: National Targets and Milestones 4. Facilitate negotiations for series of Voluntary Energy Agreements with Industry	• Agreed National energy and CO2 saving targets to harmonize with project objectives • Series of bespoke Energy Agreements with Large energy-intense Industry in Iran • Series of group Energy Agreements with SMEs in "Big 5" sectors	280,000	610,000	890,000
2. Sharing of Good EE practices	TA	4. Dedicated Programme website 5. International Best Practice /Good practice EE advice 6. Other information sharing	• Building and maintaining porgramme website • Making BREF, International Benchmarks, GP Guidance and Case Studies, etc - in Farsi • Advertising events, publications, other programme activities	200,000	360,000	560,000
3. Training, Benchmarking and other Events	TA	5. Energy management 6. Financial Appraisal 7. Other Conference/ Exhibitions/ etc 8. Equipment training/ capacity building	• 3 introductory EnMS training workshops to 100 managers in 50 large enterprises, ½ day each • 100 managers trained in financial appraisal (2 d workshop) • 600 staff trained in system optimization (approx 20 x 1 to 3 day workshops) • 20 Benchmarking and M&T workshops of 3-day duration • 20 conference/exhibitions linked to system optimisation	250,000	315,000	565,000
4. Direct support to	TA	8. Energy Performance benchmarking	• Benchmark reports of 5 sectors/ sub-	1,630,000	4,152,500	5,782,500

Project Components	**	Expected Outcomes	Expected Outputs	Grant Amount ($)	Co-financing ($)	Total ($)
Industry		9. Walk through energy audits 10. Detailed follow-up technical audits 11. Good practice case studies	sectors with large numbers of similar activities. Repeat benchmark after 2-3 years> 600 walk-through audit reports • > 400 "detailed study" reports • 60 x Iranian GP CS documents			
	INV	12. Energy Audit Equipment 13. Metering and M&T 14. Pilot schemes/test rigs	• Pool of auditing equipment held & available through PO • Approx 100 sites supported for EMS meters and software • Grants of (typically) $500k for 4 pilot schemes/ demos	810,000	3,562,500	4,372,500
5. Financial Support	TA	4. Make links to funding mechanisms	• Use Programme to link to and make use of other financial mechanisms	162,500	402,500	565,000
	INV	5. Revolving (ESCO type) fund for EE support 6. CDM – support	• Accelerate EE equipment loans; pump primer for other programmes • Revolving fund self-sufficient and still supporting EE loans	1,567,500	5,082,500	6,650,000
6. Project management				665,000	665,000	1,215,000
			Total Project Costs	**5,450,000**	**15,515,000**	**20,600,000**

Source: Project Document

b) UNIDO budget execution (GEF funding excluding agency support cost):

Sponsored class (budget lines)	Name of the sponspored class (budget lines)	Executed Budget (Expenditures) 2012 (USD)	Executed Budget (Expenditures) 2013 (USD)	Executed Budget (Expenditures) 2014 (USD)	Executed Budget (Expenditures) 2014 (USD)	**Grand Total Executed Budget (Expenditures) to date (USD)**
1100	Staff & Intern Consultants	7817.4	107872.3	74610.32	13838.12	**204138.14**
1500	Project Travel		6363.16	46380.63	9465.71	**62209.5**
1600	Staff Travel	646	1758.96	638.81	878.82	**3922.59**
1700	Nat.Consult./Staff		43701.2	157752.9	109840.13	**311294.23**
2100	Contractual Services	425000	95023.59	402827.5	14983	**937834.09**
3000	Train/Fellowship/Study			18894.01		**18894.01**
3500	International Meetings		12428.8	23.59		**12452.39**
4500	Equipment		1950.98	3090.34		**5041.32**
5100	Other Direct Costs		3520.2	-883.7	-100.56	**2535.94**
Grand Total		**433463.4**	**272619.19**	**703334.4**	**148905.22**	**1558322.21**

Source: SAP database, February 2015

II. Scope and Purpose of the Evaluation

The mid-term evaluation will cover the project duration from its starting date in October 2012 to the mid-term evaluation date in March 2015. It will assess project performance against the evaluation criteria: relevance, effectiveness, efficiency, sustainability and impact.

The mid-term evaluation has an additional purpose of drawing lessons and developing recommendations for UNIDO and the GEF that may help for improving the selection, enhancing the design and implementation of similar future projects and activities in the country and on a global scale upon project completion. The mid-term evaluation report should include examples of good practices for other projects in a focal area, country, or region.

The evaluation team should provide an analysis of the attainment of the main objective and specific objectives under the three core project components. Through its assessments, the evaluation team should enable the Government, counterparts, the GEF, UNIDO and other stakeholders and donors to verify prospects for development impact and sustainability, providing an analysis of the attainment of global environmental objectives, project objectives, delivery and completion of project outputs/activities, and outcomes/impacts based on indicators. The assessment includes re-examination of the relevance of the objectives and other elements of project design according to the project evaluation parameters defined in chapter VI.

The key question of the mid-term evaluation is whether the project has achieved or is likely to promote energy efficiency in five high energy consuming industrial sectors (Iron&Steel, Petrochemicals, Refinery, brick and cement) by adopting a national framework for Energy Management Standards (EnMS).

III. Evaluation Approach and Methodology

The mid-term evaluation will be conducted in accordance with the UNIDO Evaluation Policy, the UNIDO Guidelines for the Technical Cooperation Programmes and Projects, the GEF's 2008 Guidelines for Implementing and Executing Agencies to Conduct Mid-term Evaluations, the GEF Monitoring and Evaluation Policy from 2010 and the Recommended Minimum Fiduciary Standards for GEF Implementing and Executing Agencies.

It will be carried out as an independent in-depth evaluation using a participatory approach whereby all key parties associated with the project are kept informed and regularly consulted throughout the evaluation. The evaluation team leader will liaise with the UNIDO Office for Independent Evaluation (ODG/EVA) on the conduct of the evaluation and methodological issues.

The evaluation team will be required to use different methods to ensure that data gathering and analysis deliver evidence-based qualitative and quantitative information, based on diverse sources: desk studies and literature review, statistical analysis, individual interviews, focus group meetings, surveys and direct observation. This approach will not only enable the evaluation to assess causality through quantitative means but also to provide reasons for why certain results were achieved or not and to triangulate information for higher reliability of findings. The concrete mixed methodological approach will be described in the inception report.

The evaluation team will develop interview guidelines. Field interviews can take place either in the form of focus-group discussions or one-to-one consultations.

The methodology will be based on the following:

6. A desk review of project documents including, but not limited to:
   (a) The original project document, monitoring reports (such as progress and financial reports to UNIDO and GEF annual Project Implementation Review (PIR) reports), output reports (case studies, action plans, sub-regional strategies, etc.) and relevant correspondence.
   (b) Notes from the meetings of committees involved in the project (e.g. approval and steering committees).
   (c) Other project-related material produced by the project.
7. The evaluation team will use available models of (or reconstruct if necessary) theory of change for the different types of intervention (enabling, capacity, investment, demonstration). The validity of the theory of change will be examined through specific questions in interviews and possibly through a survey of stakeholders.
8. Counterfactual information: In those cases where baseline information for relevant indicators is not available the evaluation team will aim at establishing a proxy-baseline through recall and secondary information.
9. Interviews with project management and technical support including staff and management at UNIDO HQ and in the field and – if necessary - staff associated with the project's financial administration and procurement.
10. Interviews with project partners including Government counterparts, GEF focal points and partners that have been selected for co-financing as shown in the corresponding sections of the project documents.
11. On-site observation of results achieved in demonstration projects, including interviews of actual and potential beneficiaries of improved technologies.
12. Interviews and telephone interviews with intended users for the project outputs and other stakeholders involved with this project. The evaluator shall determine whether to seek additional information and opinions from representatives of any donor agencies or other organisations.
13. Interviews with the UNIDO Iran Office and the project's management and Project Steering Committee (PSC) members and the various national and sub-regional authorities dealing with project activities as necessary. If deemed necessary, the evaluator shall also gain broader perspectives from discussions with relevant GEF Secretariat staff.
14. Other interviews, surveys or document reviews as deemed necessary by the evaluator and/or UNIDO ODG/EVA.
15. The inception report will provide details on the methodology used by the evaluation team and include an evaluation matrix.

IV. Evaluation Team Composition

The evaluation team will be composed of one international evaluation consultant acting as a team leader and one national evaluation consultant.

The evaluation team should be able to provide information relevant for follow-up studies, including evaluation verification on request to the GEF partnership up to two years after completion of the evaluation.

Both consultants will be contracted by UNIDO. The tasks of each team member are specified in the job descriptions attached to these terms of reference.

Members of the evaluation team must not have been directly involved in the design and/or implementation of the programme/projects.

The Project Manager at UNIDO and the Project Team in Iran will support the evaluation team. The UNIDO GEF Coordinator will be briefed on the evaluation and equally provide support to its conduct.

V. Time Schedule and Deliverables

The evaluation is scheduled to take place in the period from February 2015 to March 2015. The field mission is planned for March 2015. At the end of the field mission, there will be a presentation of the preliminary findings for all stakeholders involved in this project in Iran.

After the field mission, the evaluation team leader will come to UNIDO HQ for debriefing and presentation of the preliminary findings of the Mid-term Evaluation. The draft Mid-term evaluation report will be submitted 4-6 weeks after the end of the mission.

VI. Project Evaluation Parameters

The evaluation team will rate the projects. The ***ratings for the parameters described in the following sub-chapters A to K will be presented in the form of a table*** with each of the categories rated separately and with **brief justifications for the rating** based on the findings of the main analysis. An overall rating for the project should also be given.

A. Project design

The evaluation will examine the extent to which:

- ✓ the project's design is adequate to address the problems at hand;
- ✓ a participatory project identification process was instrumental in selecting problem areas and national counterparts;
- ✓ the project has a clear thematically focused development objective, the attainment of which can be determined by a set of verifiable indicators;
- ✓ the project was formulated based on the logical framework (project results framework) approach;
- ✓ the project was formulated with the participation of national counterpart and/or target beneficiaries; and
- ✓ relevant country representatives (from government, industries and civil society) have been appropriately involved and were participating in the identification of critical problem areas and the development of technical cooperation strategies.

B. **Project relevance**

The evaluation will examine the extent to which the project is relevant to the:

- ✓ national development and environmental priorities and strategies of the Government and population of Iran, and regional and international agreements. See possible evaluation questions under "Country ownership/driveness" below.
- ✓ target groups: relevance of the project's objectives, outcomes and outputs to the different target groups of the interventions (e.g. companies, civil society, beneficiaries of capacity building and training, etc.).
- ✓ GEF's focal areas/operational programme strategies: In retrospect, were the project's outcomes consistent with the focal areas/operational program strategies of GEF? Ascertain the likely nature and significance of the contribution of the project outcomes to the wider portfolio of GEF's Focal area and Operational Program of Climate Change: CC-2 Promoting energy efficiency in the industrial sector.
- ✓ UNIDO's thematic priorities: Were they in line with UNIDO's mandate, objectives and outcomes defined in the Programme & Budget and core competencies?
- ✓ Does the project remain relevant taking into account the changing environment? Is there a need to reformulate the project design and the project results framework given changes in the country and operational context?

C. Effectiveness: objectives and planned final results at the end of the project

- The evaluation will assess to what extent results at various levels, including outcomes, have been achieved. In detail, the following issues will be assessed: To what extent have the expected outputs, outcomes and long-term objectives been achieved or are likely to be achieved? Has the project generated any results that could lead to changes of the assisted institutions? Have there been any unplanned effects?
- Are the project outcomes commensurate with the original or modified project objectives? If the original or modified expected results are merely outputs/inputs, the evaluators should assess if there were any real outcomes of the project and, if there were, determine whether these are commensurate with realistic expectations from the project.
- How do the stakeholders perceive the quality of outputs? Were the targeted beneficiary groups actually reached?
- What outputs and outcomes has the project achieved so far (both qualitative and quantitative results)? Has the project generated any results that could lead to changes of the assisted institutions? Have there been any unplanned effects?
- Identify actual and/or potential longer-term impacts or at least indicate the steps taken to assess these (see also below "monitoring of long term changes"). Wherever possible, evaluators should indicate how findings on impacts will be reported in future.
- Describe any catalytic or replication effects: the evaluation will describe any catalytic or replication effect both within and outside the project. If no effects are identified, the evaluation will describe the catalytic or replication actions

that the project carried out. No ratings are requested for the project's catalytic role.

D. Efficiency

The extent to which:

- The project cost was effective? Was the project using the least cost options?
- Has the project produced results (outputs and outcomes) within the expected time frame? Was project implementation delayed, and, if it was, did that affect cost effectiveness or results? Wherever possible, the evaluator should also compare the costs incurred and the time taken to achieve outcomes with that for similar projects. Are the project's activities in line with the schedule of activities as defined by the project team and annual work plans? Are the disbursements and project expenditures in line with budgets?
- Have the inputs from the donor, UNIDO and Government/counterpart been provided as planned, and were they adequate to meet requirements? Was the quality of UNIDO inputs and services as planned and timely?
- Was there coordination with other UNIDO and other donors' projects, and did possible synergy effects happen?

E. Assessment of sustainability of project outcomes

Sustainability is understood as the likelihood of continued benefits after the GEF project ends. Assessment of sustainability of outcomes will be given special attention but also technical, financial and organization sustainability will be reviewed. This assessment should explain how the risks to project outcomes will affect continuation of benefits after the GEF project ends. It will include both exogenous and endogenous risks. The following four dimensions or aspects of risks to sustainability will be addressed:

- ✓ **Financial risks.** Are there any financial risks that may jeopardize sustainability of project outcomes? What is the likelihood of financial and economic resources not being available once GEF assistance ends? (Such resources can be from multiple sources, such as the public and private sectors or income-generating activities; these can also include trends that indicate the likelihood that, in future, there will be adequate financial resources for sustaining project outcomes.) Was the project successful in identifying and leveraging co-financing?
- ✓ **Sociopolitical risks.** Are there any social or political risks that may jeopardize sustainability of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that project benefits continue to flow? Is there sufficient public/stakeholder awareness in support of the project's long-term objectives?
- ✓ **Institutional framework and governance risks.** Do the legal frameworks, policies, and governance structures and processes within which the project operates pose risks that may jeopardize sustainability of project benefits? Are requisite systems for accountability and transparency, and required technical know-how, in place?
- ✓ **Environmental risks.** Are there any environmental risks that may jeopardize sustainability of project outcomes? Are there any environmental factors, positive or negative, that can influence the future flow of project benefits? Are

there any project outputs or higher level results that are likely to affect the environment, which, in turn, might affect sustainability of project benefits? The evaluation should assess whether certain activities will pose a threat to the sustainability of the project outcomes.

F. Assessment of monitoring and evaluation systems

- **M&E design.** Did the project have an M&E plan to monitor results and track progress towards achieving project objectives? The Evaluation will assess whether the project met the minimum requirements for the application of the Project M&E plan (see Annex 3).
- **M&E plan implementation.** The evaluation should verify that an M&E system was in place and facilitated timely tracking of progress toward project objectives by collecting information on chosen indicators continually throughout the project implementation period; annual project reports were complete and accurate, with well-justified ratings; the information provided by the M&E system was used during the project to improve performance and to adapt to changing needs; and the project had an M&E system in place with proper training for parties responsible for M&E activities to ensure that data will continue to be collected and used after project closure. Were monitoring and self-evaluation carried out effectively, based on indicators for outputs, outcomes and impacts? Are there any annual work plans? Was any steering or advisory mechanism put in place? Did reporting and performance reviews take place regularly?
- **Budgeting and Funding for M&E activities.** In addition to incorporating information on funding for M&E while assessing M&E design, the evaluators will determine whether M&E was sufficiently budgeted for at the project planning stage and whether M&E was adequately funded and in a timely manner during implementation.

G. Monitoring of long-term changes

The monitoring and evaluation of long-term changes is often incorporated in GEF-supported projects as a separate component and may include determination of environmental baselines; specification of indicators; and provisioning of equipment and capacity building for data gathering, analysis, and use. This section of the evaluation report will describe project actions and accomplishments toward establishing a long-term monitoring system. The review will address the following questions:

a. Did this project contribute to the establishment of a long-term monitoring system? If it did not, should the project have included such a component?
b. What were the accomplishments and shortcomings in establishment of this system?
c. Is the system sustainable—that is, is it embedded in a proper institutional structure and does it have financing? How likely is it that this system continues operating upon project completion?
d. Is the information generated by this system being used as originally intended?

H. Assessment of processes affecting achievement of project results

Among other factors, when relevant, the evaluation will consider a number of issues affecting project implementation and attainment of project results. The assessment of these issues can be integrated into the analyses of project design, relevance, effectiveness, efficiency, sustainability and management as the evaluators find them fit (it is not necessary, however it is possible to have a separate chapter on these aspects in the evaluation report). The evaluation will consider, but need not be limited to, the following issues that may have affected project implementation and achievement of project results:

a. **Preparation and readiness / Quality at entry.** Were the project's objectives and components clear, practicable, and feasible within its time frame? Were counterpart resources (funding, staff, and facilities), and adequate project management arrangements in place at project entry? Were the capacities of executing institution and counterparts properly considered when the project was designed? Were lessons from other relevant projects properly incorporated in the project design? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project approval?

b. **Country ownership/drivenness.** Was the project concept in line with the sectoral and development priorities and plans of the country—or of participating countries, in the case of multi-country projects? Are project outcomes contributing to national development priorities and plans? Were the relevant country representatives from government and civil society involved in the project? Did the recipient government maintain its financial commitment to the project? Has the government—or governments in the case of multi-country projects—approved policies or regulatory frameworks in line with the project's objectives?

c. **Stakeholder involvement.** Did the project involve the relevant stakeholders through information sharing and consultation? Did the project implement appropriate outreach and public awareness campaigns? Were the relevant vulnerable groups and powerful supporters and opponents of the processes properly involved? Which stakeholders were involved in the project (i.e. NGOs, private sector, other UN Agencies etc.) and what were their immediate tasks? Did the project consult with and make use of the skills, experience, and knowledge of the appropriate government entities, nongovernmental organizations, community groups, private sector entities, local governments, and academic institutions in the design, implementation, and evaluation of project activities? Were perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process taken into account while taking decisions? Were the relevant vulnerable groups and the powerful, the supporters and the opponents, of the processes properly involved?

d. **Financial planning.** Did the project have appropriate financial controls, including reporting and planning, that allowed management to make informed decisions regarding the budget and allowed for timely flow of funds? Was there due diligence in the management of funds and financial audits? Did promised co-financing materialize? Specifically, the evaluation should also include a breakdown of final actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co-financing.

e. **UNIDO's supervision and backstopping.** Did UNIDO staff identify problems in a timely fashion and accurately estimate their seriousness? Did UNIDO staff

provide quality support and advice to the project, approve modifications in time, and restructure the project when needed? Did UNIDO provide the right staffing levels, continuity, skill mix, and frequency of field visits for the project?

f. **Cofinancing and project outcomes and sustainability.** If there was a difference in the level of expected co-financing and the cofinancing actually realized, what were the reasons for the variance? Did the extent of materialization of co financing affect project outcomes and/or sustainability, and, if so, in what ways and through what causal linkages?

g. **Delays and project outcomes and sustainability.** If there were delays in project implementation and completion, what were the reasons? Did the delays affect project outcomes and/or sustainability, and, if so, in what ways and through what causal linkages?

h. **Implementation approach[3].** Is the implementation approach chosen different from other implementation approaches applied by UNIDO and other agencies? Does the approach comply with the principles of the Paris Declaration? Does the approach promote local ownership and capacity building? Does the approach involve significant risks?

The evaluation team will rate the project performance as required by the GEF. The ratings will be given to four criteria: Project Results, Sustainability, Monitoring and Evaluation, and UNIDO related issues. The ratings will be presented in a table with each of the categories rated separately and with brief justifications for the rating based on the findings of the main analysis. As per the GEF's requirements, the report should also provide information on project identification, time frame, actual expenditures, and co-financing in the format in Annex 3, which is modeled after the GEF's project identification form (PIF).

I. Project coordination and management

The extent to which:

- The national management and overall coordination mechanisms have been efficient and effective? Did each partner have assigned roles and responsibilities from the beginning? Did each partner fulfil its role and responsibilities (e.g. providing strategic support, monitoring and reviewing performance, allocating funds, providing technical support, following up agreed/corrective actions…)?
- The UNIDO HQ and Filed Office based management, coordination, monitoring, quality control and technical inputs have been efficient, timely and effective (problems identified timely and accurately; quality support provided timely and effectively; right staffing levels, continuity, skill mix and frequency of field visits…)?
- The national management and overall coordination mechanisms were efficient and effective? Did each partner have specific roles and responsibilities from the beginning till the end? Did each partner fulfill its role and responsibilities (e.g. providing strategic support, monitoring and reviewing performance, allocating funds, providing technical support, following up agreed/corrective actions…)? Were the UNIDO HQ based management, coordination, quality control and technical inputs efficient, timely and effective (problems identified timely and

[3] Implementation approach refers to the concrete manifestation of cooperation between UNIDO, Government counterparts and local implementing partners. Usually POPs projects apply a combination of agency execution (direct provision of services by UNIDO) with elements of national execution through sub-contracts.

accurately; quality support provided timely and effectively; right staffing levels, continuity, skill mix and frequency of field visits…)?

J. Assessment of gender mainstreaming

The evaluation will consider, but need not be limited to, the following issues that may have affected gender mainstreaming in the project:

- To which extent were socioeconomic benefits delivered by the project at the national and local levels, including consideration of gender dimensions?

K. Procurement issues

The following evaluation questions that will feed in the Thematic Evaluation on Procurement have been developed and would be included as applicable in all projects (for reference, please see Annex 6 of the ToR: UNIDO Procurement Process):

- To what extent does the process provide adequate treatment to different types of procurement (e.g. by value, by category, by exception…)
- Was the procurement timely? How long does the procurement process take (e.g. by value, by category, by exception…)
- Did the good/item(s) arrive as planned or scheduled? If no, how long were the times gained or delays. If delay, what was the reason(s)?
- Were the procured good(s) acquired at a reasonable price?
- To what extent were the procured goods of the expected/needed quality and quantity?
- Were the transportation costs reasonable and within budget. If no, pleased elaborate.
- Was the freight forwarding timely and within budget? If no, pleased elaborate.
- Who was responsible for the customs clearance? UNIDO FO? UNDP? Government? Other?
- Was the customs clearance handled professionally and in a timely manner? How many days did it take?
- How long time did it take to get approval from the government on import duty exemption?
- Which were the main bottlenecks / issues in the procurement process?
- Which good practices have been identified?
- To what extent roles and responsibilities of the different stakeholders in the different procurement stages are established, adequate and clear?
- To what extent there is an adequate segregation of duties across the procurement process and between the different roles and stakeholders?

VII. Reporting

Inception report

This Terms of Reference provides some information on the evaluation methodology but this should not be regarded as exhaustive. After reviewing the project documentation and initial interviews with the project manager the International Evaluation Consultant will prepare, in collaboration with the national consultant, a short inception report that will operationalize the ToR relating to the evaluation questions and provide information on what type of and how the evidence will be

collected (methodology). It will be discussed with and approved by the responsible UNIDO Evaluation Officer. The Inception Report will focus on the following elements: preliminary project theory model(s); elaboration of evaluation methodology including quantitative and qualitative approaches through an evaluation framework ("evaluation matrix"); division of work between the International Evaluation Consultant and National Consultant; mission plan, including places to be visited, people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable[4].

Evaluation report format and review procedures

The draft report will be delivered to UNIDO Office for Independent Evaluation – ODG/EVA (the suggested report outline is in Annex 1) and circulated to UNIDO staff and national stakeholders associated with the project for factual validation and comments. Any comments or responses, or feedback on any errors of fact to the draft report provided by the stakeholders will be sent to UNIDO ODG/EVA for collation and onward transmission to the project evaluation team who will be advised of any necessary revisions. On the basis of this feedback, and taking into consideration the comments received, the evaluation team will prepare the final version of the mid-term evaluation report.

The evaluation team will present its preliminary findings to the local stakeholders at the end of the field visit and take into account their feed-back in preparing the evaluation report. A presentation of preliminary findings will take place at UNIDO HQ after the field mission.

The mid-term evaluation report should be brief, to the point and easy to understand. It must explain the purpose of the evaluation, exactly what was evaluated, and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should provide information on when the evaluation took place, the places visited, who was involved and be presented in a way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

Findings, conclusions and recommendations should be presented in a complete, logical and balanced manner. The evaluation report shall be written in English and follow the outline given in Annex 1.

Evaluation Work Plan

The "Evaluation Work Plan" includes the following main products:

5. Desk review, briefing by project manager and development of methodology: Following the receipt of all relevant documents, and consultation with the Project Manager about the documentation, including reaching an agreement on the Methodology, the desk review could be completed.
6. Inception report: At the time for departure to the field mission, the complete gamete of received materials have been reviewed and consolidated into the Inception report.
7. Field mission: The principal responsibility for managing this evaluation lies with UNIDO. It will be responsible for liaising with the project team to set up the

[4] The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by the UNIDO Evaluation Group.

stakeholder interviews, arrange the field missions, coordinate with the Government. At the end of the field mission, there will be a presentation of preliminary findings to the key stakeholders in the country where the project was implemented.

8. Preliminary findings from the field mission: Following the field mission, the main findings, conclusions and recommendations would be prepared and presented in the field and at UNIDO Headquarters.
9. A draft Mid-term evaluation report will be forwarded electronically to the UNIDO Office for Independent Evaluation and circulated to main stakeholders.
10. Final Mid-term evaluation report will incorporate comments received.

Evaluation phases	**Deliverables**
Desk review	Development of methodology approach and evaluation tools
Briefing with UNIDO Office for Independent Evaluation, Project Managers and other key stakeholder at HQ	Interview notes, detailed evaluation schedule and list of stakeholders to interview during field mission
Data analysis	Inception Evaluation Report
Conduct of Field mission. Present preliminary findings and recommendations to key stakeholders in the field	Presentation of main findings to key stakeholders in the field.
Present preliminary findings and recommendations to the stakeholders at UNIDO HQ	Presentation slides
Analysis of the data collected	Draft Mid-term Evaluation Report
Circulation of the draft report to UNIDO/relevant stakeholders and revision	Final Mid-term Evaluation Report

VIII. Quality Assurance

All UNIDO evaluations are subject to quality assessments by the UNIDO Office for Independent Evaluation. Quality assurance and control is exercised in different ways throughout the evaluation process (briefing of consultants on methodology and process of UNIDO's Office for Independent Evaluation, providing inputs regarding findings, lessons learned and recommendations from other UNIDO evaluations, review of inception report and evaluation report by the Office for Independent Evaluation). UNIDO's Office for Independent Evaluation should ensure that the evaluation report is useful for UNIDO in terms of organizational learning (recommendations and lessons learned) and is compliant with UNIDO's evaluation policy and these terms of reference.

Annex 1 - Outline of an In-Depth Project Evaluation Report

Executive summary

- Must provide a synopsis of the storyline which includes the main evaluation findings and recommendations
- Must present strengths and weaknesses of the project
- Must be self-explanatory and should be 3-4 pages in length

I. Evaluation objectives, methodology and process

- Information on the evaluation: why, when, by whom, etc.
- Scope and objectives of the evaluation, main questions to be addressed
- Information sources and availability of information
- Methodological remarks, limitations encountered and validity of the findings

II. Countries and project background

- Brief countries context: an overview of the economy, the environment, institutional development, demographic and other data of relevance to the project
- Sector-specific issues of concern to the project[5] and important developments during the project implementation period
- Project summary:
  - Fact sheet of the project: including project objectives and structure, donors and counterparts, project timing and duration, project costs and co-financing
  - Brief description including history and previous cooperation
  - Project implementation arrangements and implementation modalities, institutions involved, major changes to project implementation
  - Positioning of the UNIDO project (other initiatives of government, other donors, private sector, etc.)
  - Counterpart organization(s)

III. Project assessment

This is the key chapter of the report and should address all evaluation criteria and questions outlined in the TOR (see section VI Project Evaluation Parameters). Assessment must be based on factual evidence collected and analyzed from different sources. The evaluators' assessment can be broken into the following sections:

A. Design
B. Relevance (Report on the relevance of project towards countries and beneficiaries)
C. Effectiveness (The extent to which the development intervention's objectives and deliverables were achieved, or are expected to be achieved, taking into account their relative importance)
D. Efficiency (Report on the overall cost-benefit of the project and partner Countries contribution to the achievement of project objectives)
E. Sustainability of Project Outcomes (Report on the risks and vulnerability of the project, considering the likely effects of sociopolitical and institutional changes in partner countries, and its impact on continuation of benefits after the GEF project ends, specifically the financial, sociopolitical, institutional framework and governance, and environmental risks)

[5] Explicit and implicit assumptions in the logical framework of the project can provide insights into key-issues of concern (e.g. relevant legislation, enforcement capacities, government initiatives, etc.)

F. Assessment of monitoring and evaluation systems (Report on M&E design, M&E plan implementation, and Budgeting and funding for M&E activities)
G. Monitoring of long-term changes
H. Assessment of processes affecting achievement of project results (Report on preparation and readiness / quality at entry, country ownership, stakeholder involvement, financial planning, UNIDO support, cofinancing and project outcomes and sustainability, delays of project outcomes and sustainability, and implementation approach)
I. Project coordination and management (Report project management conditions and achievements, and partner countries commitment)
J. Gender mainstreaming
K. Procurement issues

IV. Conclusions, Recommendations and Lessons Learned

This chapter can be divided into three sections:

A. Conclusions

This section should include a storyline of the main evaluation conclusions related to the project's achievements and shortfalls. It is important to avoid providing a summary based on each and every evaluation criterion. The main conclusions should be cross-referenced to relevant sections of the evaluation report.

B. Recommendations

This section should be succinct and contain few key recommendations. They should:

- be based on evaluation findings
- realistic and feasible within a project context
- indicate institution(s) responsible for implementation (addressed to a specific officer, group or entity who can act on it) and have a proposed timeline for implementation if possible
- be commensurate with the available capacities of project team and partners
- take resource requirements into account.

Recommendations should be structured by addressees:

- UNIDO
- Government and/or Counterpart Organizations
- Donor

C. Lessons Learned

- Lessons learned must be of wider applicability beyond the evaluated project but must be based on findings and conclusions of the evaluation
- For each lesson the context from which they are derived should be briefly stated

Annexes should include the evaluation TOR, list of interviewees, documents reviewed, a summary of project identification and financial data, and other detailed quantitative information. Dissident views or management responses to the evaluation findings may later be appended in an annex.

Annex 2 - GEF Minimum Requirements for M&E[6]

Minimum Requirement 1: Project Design of M&E

All projects will include a concrete and fully budgeted monitoring and evaluation plan by the time of work program entry for full-sized projects and CEO approval for medium-sized projects. This monitoring and evaluation plan will contain as a minimum:

- SMART indicators for project implementation, or, if no indicators are identified, an alternative plan for monitoring that will deliver reliable and valid information to management;
- SMART indicators for results (outcomes and, if applicable, impacts), and, where appropriate, indicators identified at the corporate level;
- baseline for the project, with a description of the problem to be addressed, with indicator data, or, if major baseline indicators are not identified, an alternative plan for addressing this within one year of implementation;
- identification of reviews and evaluations that will be undertaken, such as mid-term reviews or evaluations of activities; and
- organizational set-up and budgets for monitoring and evaluation.

Minimum Requirement 2: Application of Project M&E

Project monitoring and supervision will include implementation of the M&E plan, comprising:

- SMART indicators for implementation are actively used, or if not, a reasonable explanation is provided;
- SMART indicators for results are actively used, or if not, a reasonable explanation is provided;
- the baseline for the project is fully established and data compiled to review progress reviews, and evaluations are undertaken as planned; and
- the organizational set-up for M&E is operational and budgets are spent as planned.

[6] http://www.thegef.org/gef/sites/thegef.org/files/documents/ME_Policy_2010.pdf

Annex 3 – Required Project Identification and Financial Data

The evaluation report should provide information on project identification, time frame, actual expenditures, and co-financing in the following format, which is modeled after the project identification form (PIF).

I. Project general information:

Project Title	
GEF ID Number	
UNIDO ID (SAP Number)	
Region	
Country(ies)	
GEF Focal Area and Operational Program:	
Co-Implementing Agency(ies)	
GEF Agencies (Implementing Agency)	
Project Executing Partners	
Project Size (FSP, MSP, EA)	
Project CEO Endorsement/Approval Date	
Project Implementation Start Date (PAD Issuance Date)	
Original Expected Implementation End Date (indicated in CEO Endorsement/Approval document)	
Revised Expected Implementation End Date (if any)	
Project Duration (Months)	
GEF Grant (USD)	
GEF PPG (USD) (if any)	-
Co-financing (USD) at CEO Endorsement	
Total Project Cost (USD) (GEF Grant + Co-financing at CEO Endorsement)	
Agency Fee (USD)	

II. Dates

Milestone	Expected Date	Actual Date
Project CEO Endorsement/Approval Date		
Project Implementation Start Date (PAD Issuance Date)		
Original Expected Implementation End Date (indicated in CEO Endorsement/Approval document)		
Revised Expected Implementation End Date (if any)		
Mid-term evaluation completion		
Planned Tracking Tool Date		

III. Project Framework

Project Component	Activity Type	GEF Financing (in $)		Cofinancing (in $)	
		Approved	Actual	Promised	Actual
1.					
2.					
3.					
4.					
5.					
6. Project Management					
Total					

Activity types are:

a) Experts, researches hired
b) technical assistance, Workshop, Meetings or experts consultation scientific and technical analysis, experts researches hired
c) Promised co-financing refers to the amount indicated on endorsement/approval.

IV. Co-financing

		Project preparation		Project implementation		Total	
Source of co-financing	Type	Expected	Actual	Expected	Actual	Expected	Actual
Host gov't contribution							
GEF Agency (ies)							
Bilateral aid agency(ies)							
Multilateral agency(ies)							
Private sector							
NGO							
Other							
Total co-financing							

Expected amounts are those submitted by the GEF Agencies in the original project appraisal document. Co-financing types are grant, soft loan, hard loan, guarantee, in kind, or cash.

Annex 4 – Job Descriptions

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

WBS 120506

Title:	International Evaluation Expert for MTR Iran
Main Duty Station and Location:	**Tehran, Iran**
Mission/s to:	**Tehran, Iran**
Start of Contract (EOD):	**9 February 2015**
End of Contract (COB):	**20 March 2015**
Number of Working Days:	**30**

ORGANIZATIONAL CONTEXT

The Programme Development and Technical Cooperation Division (PTC) is responsible for providing technical cooperation services on technological and economic issues in the following areas covered by five branches: Trade Capacity Building, Business Investment and Technology Service Branch, Agri-Business Development, Energy and Climate Change and the Montreal Protocol.

This assignment is located in the Industrial Energy Efficiency Unit within the Energy and Climate Change Branch. The unit is responsible for promoting the efficient use of energy by industrial users.

Under the overall guidance and supervision of the UNIDO Evaluation Group and in direct coordination with the project manager in PTC/ECC/IEE, the national project coordinator and the UNIDO representative in Iran as well as the lead Government counterpart at the Iranian Fuel Conservation Company (IFCO), the incumbent will conduct the mid-term review of the project.

PROJECT CONTEXT

The project “Energy Efficiency in Key Industrial Sectors” is financed by the GEF and implemented by UNIDO as an implementing agency of the GEF. The project was approved in August 2012 and is of a duration of five years.

The main objective of the project is to accelerate the uptake of energy efficiency (EE) by setting up voluntary energy agreements with industrial sectors, providing a framework for National Energy Management Standards, assisting in capacity building

through training, developing targets, providing benchmarks and most importantly, by identifying technology improvement options to these high energy intensive industrial sectors..

The project consists of five components:
(a) Policy Support: Integrating Energy Efficiency priorities into national industrial policies and development programmes on energy intensive SMEs in Iran through setting up voluntary energy agreements with industrial sectors, putting in place a system for monitoring and verification of impacts and providing a framework for energy management standards.

(b)Training and Capacity building: Building a national cadre of experts on energy management systems and system optimization as well as energy auditors, introducing the concepts of energy management systems and system optimization to the company management, training enterprises on the preparation of bankable projects.

(c) Direct support to Industry: Implementing one demonstration project within each sector to act as show case for other industries and supporting those with energy audits, energy auditing equipment and energy metering equipment.

(d) Facilitating financing by training banks on the financial appraisal of EE projects and establishing a revolving fund to support investments in EE.

(e) Information dissemination and Awareness raising on EE good practices, selected case studies, sectoral benchmark reports, discussion forums and setting up of a data bank on EE technologies and suppliers.

DUTIES
The international consultant in cooperation with the national consultant will carrying out the mid-term review of the project according to the Terms of Reference of the MTR. S/he will be responsible for drafting and finalizing the evaluation report. S/he will perform the following tasks:

MAIN DUTIES	Concrete/ measurable Outputs to be achieved	Expected duration	Location
Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data…); determine key data to collect in the field and prepare key instruments (questionnaires, logic models…) to collect these data through interviews and/or surveys during and prior to the field missions Assess the adequacy of legislative and regulatory framework for Industrial	List of detailed evaluation questions to be clarified; questionnaires/ interview guide; logic models; list of key data to collect, draft list of stakeholders to interview during the field missions Brief assessment of	3 days	Home based

MAIN DUTIES	Concrete/ measurable Outputs to be achieved	Expected duration	Location
Energy Efficiency in Iran	the adequacy of the country's legislative and regulatory framework		
Briefing with the UNIDO Evaluation Group, project managers and other key stakeholders at HQ	Interview notes, detailed evaluation schedule and list of stakeholders to interview during the field missions Division of evaluation tasks with the National Consultant	2 days	Vienna
Conduct field mission	Presentations of the evaluation's initial findings in Iran, draft conclusions and recommendations to stakeholders in the country at the end of the missions. Agreement with the National Consultant on the structure and content of the evaluation report and the distribution of writing tasks	10 days (including travel days)	Iran
Present overall findings and recommendations to the stakeholders at UNIDO HQ	Presentation slides, feedback from stakeholders obtained and discussed	3 days	Vienna
Prepare the evaluation report according to TOR Coordinate the inputs from the National Consultant and combine with her/his own inputs into the draft evaluation report	Draft evaluation report	10 days	Home based

MAIN DUTIES	Concrete/ measurable Outputs to be achieved	Expected duration	Location
Revise the draft project evaluation reports based on comments from UNIDO Evaluation Group and stakeholders and edit the language and form of the final version according to UNIDO standards	Final evaluation report	2 days	Home based
Total number of days		30 days	

REQUIRED COMPETENCIES

Core values:
1. Integrity;
2. Professionalism;
3. Respect for diversity;

Core competencies:
1. Results orientation and accountability;
2. Planning and organizing;
3. Communication and trust;
4. Team orientation;

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education:

- Advanced degree in environmental engineering, energy, development studies
- At least 10 years of relevant evaluation and project management experience
- Experience in evaluation of GEF projects

Technical and Functional Experience:

- Knowledge of GEF and UNIDO technical cooperation activities an asset
- Familiarity with the institutional context of the project in the Iran (*energy* authorities, NGOs, etc.)

Required Language: English
Reporting language: English

Absence of Conflict of Interest:
According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the Office for Independent Evaluation.

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

WBS 120506

Title:	National Expert for MTR Iran
Main Duty Station and Location:	**Tehran, Iran**
Mission/s to:	**Tehran, Iran**
Start of Contract (EOD):	**9 February 2015**
End of Contract (COB):	**8 April 2015**
Number of Working Days:	**30**

ORGANIZATIONAL CONTEXT

The Programme Development and Technical Cooperation Division (PTC) is responsible for providing technical cooperation services on technological and economic issues in the following areas covered by five branches: Trade Capacity Building, Business Investment and Technology Service Branch, Agri-Business Development, Energy and Climate Change and the Montreal Protocol.

This assignment is located in the Industrial Energy Efficiency Unit within the Energy and Climate Change Branch. The unit is responsible for promoting the efficient use of energy by industrial users.

Under the overall guidance and supervision of the UNIDO Evaluation Group and and in direct coordination with the project manager in PTC/ECC/IEE, the national project coordinator and the UNIDO representative in Iran as well as the lead Government counterpart at the Iranian Fuel Conservation Company (IFCO), the incumbent will assist the international evaluator in collecting inputs and preparing for the mid-term review of the project.

PROJECT CONTEXT

The project “Energy Efficiency in Key Industrial Sectors” is financed by the GEF and implemented by UNIDO as an implementing agency of the GEF. The project was approved in August 2012 and is of a duration of five years.

The main objective of the project is to accelerate the uptake of energy efficiency (EE) by setting up voluntary energy agreements with industrial sectors, providing a framework for National Energy Management Standards, assisting in capacity building through training, developing targets, providing benchmarks and most

importantly, by identifying technology improvement options to these high energy intensive industrial sectors..

The project consists of five components:

(a) Policy Support: Integrating Energy Efficiency priorities into national industrial policies and development programmes on energy intensive SMEs in Iran through setting up voluntary energy agreements with industrial sectors, putting in place a system for monitoring and verification of impacts and providing a framework for energy management standards,

(b)Training and Capacity building: Building a national cadre of experts on energy management systems and system optimization as well as energy auditors, introducing the concepts of energy management systems and system optimization to the company management, training enterprises on the preparation of bankable projects.

(c) Direct support to Industry: Implementing one demonstration project within each sector to act as show case for other industries and supporting those with energy audits, energy auditing equipment and energy metering equipment.

(d) Facilitating financing by training banks on the financial appraisal of EE projects and establishing a revolving fund to support investments in EE

(e) Information dissemination and Awareness raising on EE good practices, selected case studies, sectoral benchmark reports, discussion forums and setting up of a data bank on EE technologies and suppliers.

DUTIES

The National consultant in cooperation with the international consultant will support carrying out the mid-term review of the project according to the Terms of Reference of the MTR. S/he will work under the supervision of the leader of the evaluation team and will be responsible for providing substantive inputs to the draft and final evaluation report. S/he will perform the following tasks:

MAIN DUTIES	Concrete/ measurable Outputs to be achieved	Expected duration	Location
Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data…); in cooperation with Team Leader: determine key data to collect in the field and prepare key instruments (questionnaires, logic models…) to collect these data through interviews and/or surveys during and prior to the field missions	List of detailed evaluation questions to be clarified; questionnaires/ interview guide; logic models; list of key data to collect, draft list of stakeholders to interview during the field missions	3 days Home based	Home based
Briefing with the MTR team leader, UNIDO project manager and the national project management unit and other key stakeholders	Interview notes, detailed MTR schedule and list of stakeholders to interview during the field missions	3 days home based (telephone interviews)	Home based

MAIN DUTIES	Concrete/ measurable Outputs to be achieved	Expected duration	Location
Assist in setting up the MTR mission agenda, coordinating meetings and site visits	Division of MTR tasks with the International Consultant/team leader		
Conduct field mission together with the MTR team leader	Presentations of the MTR's initial findings, draft conclusions and recommendations to stakeholders in the country at the end of the mission. Collect inputs required for the GEF MTR template	10 days (including travel days)	Home based
Prepare inputs to the MTR report according to TOR and as agreed with Team Leader	Draft MTR report	10 days Home base	Home based
Revise the draft project MTR reports based on comments from UNIDO MTR Group and stakeholders and edit the language and form of the final version according to UNIDO standards	Final MTR report	4 days Home base	Home based
Total number of working days		30	

REQUIRED COMPETENCIES

Core values:
1. Integrity;
2. Professionalism;
3. Respect for diversity;

Core competencies:
1. Results orientation and accountability;
2. Planning and organizing;
3. Communication and trust;
4. Team orientation;

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education:

- Advanced degree in development studies or related areas

- At least 5 years of relevant evaluation experience
- Experience in evaluation of projects

Technical and Functional Experience:

- Knowledge of GEF and UNIDO technical cooperation activities an asset
- Familiarity with the institutional context of the project in the Iran (energy authorities, NGOs, etc.)

Required Language: English and Farsi
Reporting language: English

Absence of Conflict of Interest:
According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the Office for Independent Evaluation.

Annex 5 – Project Results Framework

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
GEF Strategic Priorities	Four key strategic indicators will be: cumulative energy saved, cumulative CO2 emissions avoided, $ energy savings (at international prices) and $M of EE technology investment. <u>Medium term targets include</u>: • Annual savings of 42 TWh and 11.9 Mt CO2/y • Cumulative savings of 117 TWh and 33.1 Mt CO2 • Cumulative energy cost savings of $4,700 M • Cumulative investment in EE technologies and techniques of $5,000 M (both direct and indirect investments) • Indigenous fossil fuel reserve savings of 0.8 x 109 m3 gas and 0.8 million m3 oil <u>Long term aims (by end 2024/5)</u> • 299 Mt of cumulative CO2 savings as a result of the GEF programme • $6,000 M of energy savings per year ($42,200 M cumulative), with $18.100 M cumulative investment in EE technologies and techniques.	Series of: • Top-down (National statistical level) data gathering sets and • Bottom-up monitors for reporting of energy and output data, with • adjustments to BY to accommodate changes to output mix Details need to be agreed as one of the first steps for the GEF/ UNIDO/ IFCO programme office.	• Energy subsidy for industry to be phased out over next 5 years • Projected growth patterns across industry, of 6% pa, are realistic • No substantial change to industrial output product mix • Energy costs = nominal value $40/MWh • All investments (including that not influenced by the Programme), assume a nominal 3 year payback for average investment • Energy saving service providers find the line of business profitable, and companies choose to make energy efficiency investments • Implementation of project activities will foster industrial energy efficiency investments and reduce CO2eq emissions

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
	• Indigenous fossil fuel reserve savings of 7×10^9 m3 gas and 7 million m^3 oil. Additional benefits. M&E tracking to be agreed – probably as bottom-up assessment: • Reduced dust, NOx , SOx, fugitive CH4 and other emissions, plus wastes arising: to land and water. • Reduced Consumable item losses: metal, raw materials, etc.		

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
1. Programme Management			
National Iranian EE office	Established National Iranian Energy Efficiency office – affiliated with IFCO	Physical existence and functioning of office At least 5 staff members	The Programme Office, Team Leader, key staff, etc and programme web-site are acted upon as soon as the Programme starts - with no barriers to their development.
Information campaign	Information campaign implemented	Copies of information assets, contact log	
Programme Website	Fully functional Farsi-English language web site	Physical existence of Website Website "hit" statistics	
Energy Forums	Discussion forum and Peer-to-Peer network established and operational;	Discussion archive and membership list	
Bank capacity building	Enhanced capacity of local banks to identify and process loans for industrial energy efficiency	Deal flow through local banks	
2. Energy Agreements / Legislative Drivers			
Negotiated Energy Agreements with Industry	Series of Negotiated Energy Agreements with relevant Iranian Government Body, for an estimated 150-200 large, energy-intense Industrial sites and/or several sub-sectors and clusters	Established Negotiated Energy Agreements, with (1) 2024/5 EE targets and Milestones (2) Written Action Plans In place for:	Many of the legislative and economic drivers discussed in previous sections are in-place

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
		- 15 steel sites - 15 Refineries, - 50 Petrochemicals, - 60 cement sites; - 20-30 of the largest brick - 5-10 Sectors/ Groups/ clusters of SME operators	Macro economic conditions are such that investment in EE continues to be attractive. Banks have capital for investment.
Government capacity enhanced	Government capacity to design and implement an effective industrial EE policy enhanced Target x2 by project mid-term and x4 by end of project compared to start of project[7]	Review of institutional capacity of government at start, mid-term and end of project	

[7] The system for scoring government institutional capacity, including weighting of factors, will be determined at project inception. Scores will be based on expert reviews at the beginning middle and end of the project.

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
3. Sharing of Good Energy Practices			
Website	Dedicated website for energy/ environment/ low-carbon technologies and techniques, with access to Events and Training, Case Study reports, the library of information, etc.	Website up and operation. Log of "hits" and downloads from site	The Programme Office, Team Leader, key staff, etc and programme web-site are acted upon as soon as the Programme starts - with no barriers to their development. Any delays will have a cumulative impact on these specific deliverables
EE Library	Library of information (in Farsi), covering: - International Best Practices, Guidance & Benchmarks; - Good operating practices - sector specific and cross-sector; - Iranian Case Study reports of EE investment in EE technologies and techniques (x 60); - National Energy "Benchmarks" for industrial sectors with large numbers of broadly similar operators; - Audited findings from up to 5 "demonstration" or "pilot-scheme" projects; - Proceedings from talks and events supported by the EE programme; - Forum for discussion and sharing of best practices.	> 200 documents/ reports/ Event or training activities/ etc all pertinent to to the Iranian Industry EE programme It is difficult to specify exactly what these outputs are, but ideally they should harmonize with the Verifiable Indicators in the adjacent column.	
Case Studies	Included above, as well as site visits/ events to support the launch of the CS	Target 60 x CS documents and at least 20 x Launch events	

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
EE Technologies	Data bank on energy efficiency technologies	Web-based "organic" databank	

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
4. Training & Events			
Generate EnMS Training material	Fully developed training materials for EnMS training and system optimisation.	Acceptable quality training material available for use.	Sites are sufficiently motivated to send delegates for training and upload Programme Website. Local trainers are interested in the information and resources and this contributes to their capacity to train others Suppliers are sufficiently motivated to showcase technologies and prepare
Training for 100's of key staff from all sectors, inc: - Energy Management and EMS (ISO14001/	Covering: - Introductory training sessions to 100 managers in 50 large enterprises (bespoke 1-1 direct support for large Organisations; general support for SMEs) - Formal training in EnMS and systems optimisation: 100 managers in 50 enterprises[8]	Participant logs/ evaluation forms from events[9] Sites to upload to the programme website, Energy Policies, Actions Plans as well as 'Register of Investigations and Actions' M&T 'logbook' demonstrating	

[8] Along the lines of ISO14001 or ISO50001, covering: Top-down commitment, written policy, energy champions & teams, Meter/ M&T, no/low cost EE activities followed by E investment.

[9] Number of Conferences & Exhibition organised by Programme, and how many attendees (with split of different types) participated.

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
ISO50001 or similar accreditation); - Energy Benchmarking - M&T techniques - Staff awareness and motivation - Sector specific and cross-sector EE technologies/ techniques - CDM support	- Extensive on-site EnMS training for 10 large enterprises; - 100 SMEs trained in energy management systems - Others – bespoke	M&T analysis and target setting techniques Findings of site monitoring activities	presentations
In-country capacity building. [Training trainers]	Up to 10 national trainers trained in EMS and systems optimisation. Average "trainer capacity score" increased – target x4 by end of project compared to start.[10]	Regular monitoring of support consultants. Survey of capacity of trainers at project start, mid-term and end.	
General	Include programme launch, annual review	Participant logs/ evaluation forms	

[10] The system for scoring trainers capacity will be determined at project inception. Scores will be assigned based on results of the start of project survey, and compared to that in the mid-term and end-term survey. Indicators for enhanced capacity may include: knowledge of international best practice, appropriate staffing in terms of number and skills, presence of processes and procedures to facilitate industrial EE.

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
programme events	and closure		
Other Training Conferences, exhibitions, seminars.	Link in with other related conferences etc. -600 staff trained in system optimization (20 three day workshops) -20 conference exhibitions linked to system optimization	Participant logs/ evaluation forms	
Energy Performance "Benchmarking"	Disseminate findings from Energy benchmarks,– see 3 above -20 energy benchmarking and M&T workshops of 3-day duration	Participant logs/ evaluation forms	
Financial Appraisal Training	- 100 managers trained in financial assessment at 3-day workshops Specific activity - to help identify better investment opportunities and prioritise	Participant logs/ evaluation forms	
Training in system optimisation technical, equipment/ capacity building	Specific training for technical equipment 10 National consultants with up to 15 different types of kit.	• Participant logs/ evaluation forms	

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
5. Direct Support for Industry			
Benchmarking	Iran benchmarking developed and introduced in 5 Industrial sectors/ sub-sectors. Target 5 sub-sectors of predominantly SMEs (e.g. cement, brick, DRI steel).[11] with (1) initial and (2) repeat benchmark after 2-3 years.	Benchmark reports (for uploading on to website: - 5 x initial benchmark reports; comparison against International "norms" - 5 x repeat benchmarks – review any improvements	There is no major deterioration in the macro economic and political climate. Iran emerges from the current financial crisis within 2-3 years. The impact from the phasing out of the Energy Subsidy has no major bearing on the robustness of individual sectors or Iranian industry. The barriers identified are the principal constraints to growth in this area. The Programme helps overcome existing EE market barriers and builds a sustainable market capacity
Industry auditing: capacity building	In-country industrial auditing skills: - Est 20-30 trained technical staff with energy audit skills - Technical EE testing kit – likely to be with the above staff	Survey of capacity of trainers at project start, mid-term and end. Regular monitoring and reporting of support consultants	
Walk through audits	General/ walk-through audit finding reports for 600 industrial sites, including: (a) Identification of up to 30% EE opportunities per site; (b) Practical (and part-costed) EE plan-of-action. Two main types are envisaged:	600 x audit reports received and accepted by Programme Office	

[11] Each sector/ sub-sector covering a minimum of 10 sites, and no site accounting for more than 25% of total output. Longer term can look to extend beyond "Big 5" sectors, e.g. Food & Drink

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
	- Short, 1-3 day audits: largely focused at SME operators with limited technical expertise. - Longer (bespoke) 4-8 day audits. Useful to sectors with larger energy-intense operators		"Before" monitoring may need adjustment if (say) the "after" case has to meet legislative requirements or minimum standards.
Technical/ detailed audits	Detailed technical audits/ feasibility studies for approx 400 specific EE opportunities/ cluster of opportunities at selected industrial sites.	400 x detailed technical audit reports received and accepted by Programme Office	
Case Studies (CSs)	Case Studies: financial support and auditing/ evaluation of 60 EE technologies and techniques across all sectors. CSs will be used to promote EE technologies and populate the Programme web-site.	60 x Iranian CS reports received and accepted by Programme Office, covering key commercial, technical & environmental issues, and with "before" and "after" monitoring.	
Metering and M&T equipment	Financial support for purchase and installation of sub-meters/ M&T software at >100 industrial sites.[12]	Log number of sites receiving support & value of this support. Target: - $1.5 M support; - support for 100 sites.	
Demo/ pilot schemes	Direct financial support for up to 5 "demonstration" / "pilot-scheme" projects.	Log number projects & value of support. Target:	

[12] At a recommended contribution from the programme of 25%. MM&T systems should help to make 5-15% energy savings over the first 1-2 years, mainly through tighter control and identifying major areas of waste.

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
		- $3.25 M support ; - support for 5 projects	
Investment assistance	Assist participating sites to attract EE investments. [*Links with Financial support, below*.]	TBA	

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
6. Financial Mechanisms/support			
Revolving investment fund	"Revolving fund": By end 2011/12, to have an ESCO-type loan scheme system in place, with initial input from the GEF/UNIDO/ IFCO programme of >$7 M	By 2015, the revolving fund will have: - Made $14M of EE investment - generated $7M/y energy saving – and growing; - saved $16M cumulative energy; - have $4.8M/y to re-invest in revolving fund for 2015/6 EE investment. - left a legacy of a demonstrated model of ESCO-type investment	There is no major deterioration in the macro economic and political climate, and Iran emerges from the current financial crisis within the next two-three years. By 2014/5, programme will have made 3 year's worth of lending at 1.5 y payback

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
		in EE technologies and techniques.	
CDM	Improved leverage of CDM support from third parties, through the programme	TBA	
Case Studies	See 5 above		
Financial Appraisal training	See 3 above		
Meter, M&T equipment	See 5 above		

Annex 6 – UNIDO Procurement Process

UNIDO Procurement Process
-- Generic Approach and Assessment Framework –

1. Introduction

This document outlines an approach and encompasses a framework for the assessment of UNIDO procurement processes, to be included as part of country evaluations as well as in technical cooperation (TC) projects/programmes evaluations.

The procurement process assessment will review in a systematic manner the various aspects and stages of the procurement process being a key aspect of the technical cooperation (TC) delivery. These reviews aim to diagnose and identify areas of strength as well as where there is a need for improvement and lessons.

The framework will also serve as the basis for the "thematic evaluation of the procurement process efficiency" to be conducted in 2015 as part of the ODG/EVA work programme for 2014-15.

2. Background

Procurement is defined as the overall process of acquiring goods, works, and services, and includes all related functions such as planning, forecasting, supply chain management, identification of needs, sourcing and solicitation of offers, preparation and award of contract, as well as contract administration until the final discharge of all obligations as defined in the relevant contract(s). The procurement process covers activities necessary for the purchase, rental, lease or sale of goods, services, and other requirements such as works and property.

Past project and country evaluations commissioned by ODG/EVA raised several issues related to procurement and often efficiency related issues. It also became obvious that there is a shared responsibility in the different stages of the procurement process which includes UNIDO staff, such as project managers, and staff of the procurement unit, government counterparts, suppliers, local partner agencies (i.e. UNDP), customs and transport agencies etc..

In July 2013, a new "UNIDO Procurement Manual" was introduced. This Procurement Manual provides principles, guidance and procedures for the Organization to attain specified standards in the procurement process. The Procurement Manual also establishes that "The principles of fairness, transparency, integrity, economy, efficiency and effectiveness must be applied for all procurement transactions, to be delivered with a high level of professionalism thus justifying UNIDO's involvement in and adding value to the implementation process".

To reduce the risk of error, waste or wrongful acts and the risk of not detecting such problems, no single individual or team controls shall control all key stages of a transaction. Duties and responsibilities shall be assigned systemically to a number of individuals to ensure that effective checks and balances are in place.

In UNIDO, authorities, responsibilities and duties are segregated where incompatible. Related duties shall be subject to regular review and monitoring. Discrepancies, deviations and exceptions are properly regulated in the Financial Regulations and Rules and the Staff Regulations and Rules. Clear segregation of duties is maintained between

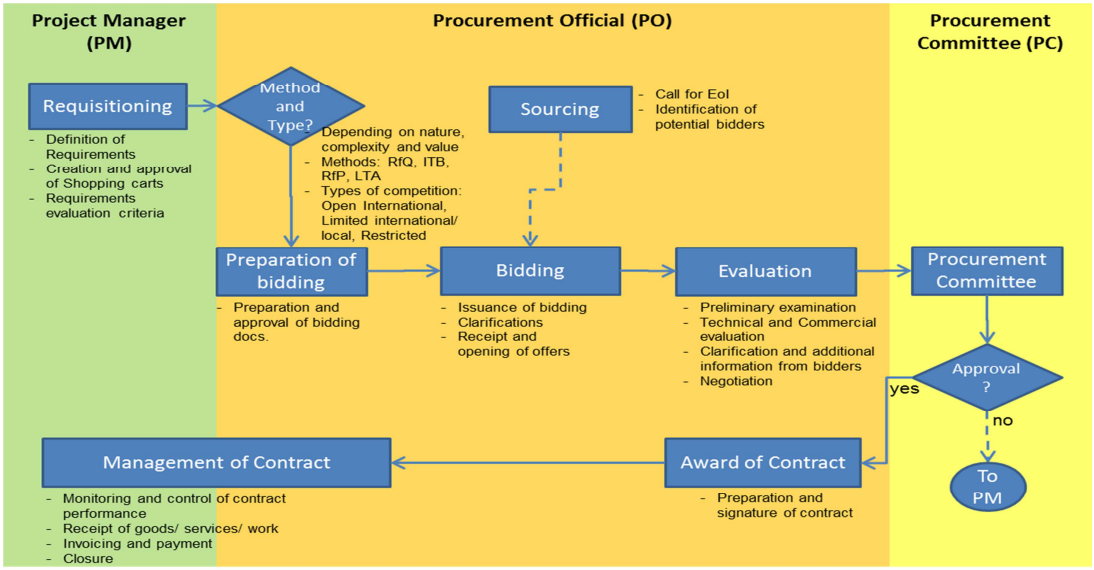
programme/project management, procurement and supply chain management, risk management, financial management and accounting as well as auditing and internal oversight. Therefore, segregation of duties is an important basic principle of internal control and must be observed throughout the procurement process.

The different stages of the procurement process should be carried out, to the extent possible, by separate officials with the relevant competencies. As a minimum, two officials shall be involved in carrying out the procurement process. The functions are segregated among the officials belonging to the following functions:

- Procurement Services: For carrying out centralized procurement, including review of technical specifications, terms of reference, and scope of works, market research/surveys, sourcing/solicitation, commercial evaluation of offers, contract award, contract management;
- Substantive Office: For initiating procurement requests on the basis of well formulated technical specifications, terms of reference, scope of works, ensuring availability of funds, technical evaluation of offers; award recommendation; receipt of goods/services; supplier performance evaluation. In respect of decentralized procurement, the segregation of roles occur between the Project Manager/Allotment Holder and his/her respective Line Manager. For Fast Track procurement, the segregate on occurs between the Project Manager/Allotment Holder and Financial Services;
- Financial Services: For processing payments.

Figure 1 presents a preliminary "Procurement Process Map", showing the main stages, stakeholders and their respective roles and responsibilities. During 2014/2015, in preparation for the thematic evaluation of the procurement process in 2015, this process map/ workflow will be further refined and reviewed.

Figure 1: UNIDO Procurement Process Map



3. Purpose

The purpose of the procurement process assessments is to diagnose and identify areas for possible improvement and to increase UNIDO's learning about strengths and weaknesses in the procurement process. It will also include an assessment of the adequacy of the 'Procurement Manual" as a guiding document.

The review is intended to be useful to managers and staff at UNIDO headquarters and in the field offices (project managers, procurement officers), who are the direct involved in procurement and to UNIDO management.

4. Scope and focus

Procurement process assessments will focus on the efficiency aspects of the procurement process, and hence it will mainly fall under the efficiency evaluation criterion. However, other criteria such as effectiveness will also be considered as needed.

These assessments are expected to be mainstreamed in all UNIDO country and project evaluations to the extent of its applicability in terms of inclusion of relevant procurement related budgets and activities.

A generic evaluation matrix has been developed and is found in Annex B. However questions should be customized for individual projects when needed.

5. Key Issues and Evaluation Questions

Past evaluations and preliminary consultations have highlighted the following aspects or identified the following issues:

- Timeliness. Delays in the delivery of items to end-users.
- Bottlenecks. Points in the process where the process stops or considerably slows down.
- Procurement manual introduced, but still missing subsidiary templates and tools for its proper implementation and full use.
- Heavy workload of the procurement unit and limited resources and increasing "procurement demand"
- Lack of resources for initiating improvement and innovative approaches to procurement (such as Value for Money instead of lowest price only, Sustainable product lifecycle, environmental friendly procurement, etc.)
- The absence of efficiency parameters (procurement KPIs)

On this basis, the following evaluation questions have been developed and would be included as applicable in all project and country evaluations in 2014-2015

- To what extent does the process provide adequate treatment to different types of procurement (e.g. by value, by category, by exception…)

- Was the procurement timely? How long the procurement process takes (e.g. by value, by category, by exception…)

- Did the good/item(s) arrive as planned or scheduled? If no, how long were the times gained or delays. If delay, what was the reason(s)?

- Were the procured good(s) acquired at a reasonable price?

- To what extent were the procured goods of the expected/needed quality and quantity?
- Were the transportation costs reasonable and within budget. If no, pleased elaborate.
- Was the freight forwarding timely and within budget?. If no, pleased elaborate.
- Who was responsible for the customs clearance? UNIDO FO? UNDP? Government? Other?
- Was the customs clearance handled professionally and in a timely manner? How many days did it take?
- How long time did it take to get approval from the government on import duty exemption?
- Which were the main bottlenecks / issues in the procurement process?
- Which good practices have been identified?
- To what extent roles and responsibilities of the different stakeholders in the different procurement stages are established, adequate and clear?
- To what extent there is an adequate segregation of duties across the procurement process and between the different roles and stakeholders?

6. Evaluation Method and Tools

These assessments will be based on a participatory approach, involving all relevant stakeholders (e.g. process owners, process users and clients).

The evaluation tools to be considered for use during the reviews are:

- **Desk Review**: Policy, Manuals and procedures related to the procurement process. Identification of new approaches being implemented in other UN or international organizations. Findings, recommendations and lessons from UNIDO Evaluation reports.
- **Interviews**: to analyze and discuss specific issues/topics with key process stakeholders
- **Survey to stakeholders**: To measure the satisfaction level and collect expectations, issues from process owners, user and clients
- **Process and Stakeholders Mapping**: To understand and identify the main phases the procurement process and sub-processes; and to identify the perspectives and expectations from the different stakeholders, as well as their respective roles and responsibilities
- **Historical Data analysis from IT procurement systems**: To collect empirical data and identify and measure to the extent possible different performance dimensions of the process, such as timeliness, re-works, complaints, ..)

An evaluation matrix is presented in Annex A, presenting the main questions and data sources to be used in the project and country evaluations, as well as the preliminary questions and data sources for the forthcoming thematic evaluation on Procurement in 2015.

ANNEX A: Evaluation Matrix for the Procurement Process

No.	Area	Evaluation Question	Indicators[13]	Data Source(s) For Country / Project Evaluations	Additional data Source(s) For Thematic Evaluation of procurement process in 2015.
	Timeliness	- Was the procurement timely? How long the procurement process takes (e.g. by value, by category, by exception…)	(Overall) Time to Procure (TTP)	• Interviews with PMs, Government counterparts and beneficiaries	• Procurement related documents review • SAP/Infobase (queries related to procurement volumes, categories, timing, issues) • Evaluation Reports • Survey to PMs, procurement officers, beneficiaries, field local partners. • Interviews with Procurement officers
		- Did the good/item(s) arrive as planned or scheduled? If no, how long were the times gained or delays. If delay, what was the reason(s)?	Time to Delivery (TTD)	• Interviews with PM, procurement officers and Beneficiaries	
		- Was the freight forwarding timely and within budget? If no, pleased elaborate.			
		- Was the customs clearance timely? How many days did it take?		• Interviews with PMs, Government counterparts and beneficiaries	
		- How long time did it take to get approval from the government on import duty exemption	Time to Government Clearance (TTGC)	• Interviews with beneficiaries	
	Roles	- To what extent roles	Level of clarity	• Procurement Manual	• Procurement related

[13] These indicators are preliminary proposed here. They will be further defined and piloted during the Thematic Evaluation of UNIDO procurement process planned for 2015.

No.	Area	Evaluation Question	Indicators[13]	Data Source(s) For Country / Project Evaluations	Additional data Source(s) For Thematic Evaluation of procurement process in 2015.
	and Responsibilities	and responsibilities of the different stakeholders in the different procurement stages are established, adequate and clear?	of roles and responsibilities	• Interview with PMs	document s review • Evaluation Reports • Survey to PMs, procurement officers, beneficiaries, field local partners. • Interviews with Procurement officers
		- To what extent there is an adequate segregation of duties across the procurement process and between the different roles and stakeholders?		• Procurement Manual • Interview with PMs	
		- How was responsibility for the customs clearance arranged? UNIDO FO? UNDP? Government? Other?		• Procurement Manual • Interview to PMs • Interviews with local partners	
		- To what extent were suppliers delivering products/ services as required?	Level of satisfaction with Suppliers	• Interviews with PMs	
	Costs	- Were the transportation costs reasonable and within budget. If no, pleased elaborate.		• Interviews with PMs	• Evaluation Reports • Survey to PMs, procurement officers, beneficiaries, field local partners. • Interviews with Procurem
		- Were the procured goods/services within the expected/planned costs? If no, please elaborate	Costs vs budget	• Interview with PMs	

No.	Area	Evaluation Question	Indicators[13]	Data Source(s) For Country / Project Evaluations	Additional data Source(s) For Thematic Evaluation of procurement process in 2015.
					ent officers
	Quality of Products	- To what extent the process provides adequate treatment to different types of procurement (e.g. by value, by category, by exception…)		• Interview with PMs	• Evaluation Reports • Survey to PMs, procurement officers, beneficiaries, field local partners. • Interviews with Procurement officers
		- To what extent were the procured goods of the expected/needed quality and quantity?.	Level of satisfaction with products/services	• Survey to PMs and beneficiaries • Observation in project site	
	Process / workflow	- To what extent the procurement process if fit for purpose?	Level of satisfaction with the procurement process	• Interviews with PMs, Government counterparts and beneficiaries	• Procurement related documents review • Evaluation Reports • Survey to PMs, procurement officers, beneficiaries, field local partners. • Procurement related documents review • Evaluation Reports • Survey to PMs, procurement officers, beneficiaries, field
		- Which are the main bottlenecks / issues in the procurement process?		• Interviews with PMs, Government counterparts and beneficiaries	
		- Which part(s) of the procurement process can be streamlined or simplified?		• Interview with PMs	

No.	Area	Evaluation Question	Indicators[13]	Data Source(s) For Country / Project Evaluations	Additional data Source(s) For Thematic Evaluation of procurement process in 2015.
					local partners. • Interviews with Procurement officers

Annex B: List of persons met (interviewees)

Name	Title	Agency / INSTITUTION	Date/Location
Ms. Rana GHONEIM	Project Manager / Industrial Development Officer, Industrial Energy Efficiency, Energy Branch	UNIDO	**February 18, 2015** Vienna, Austria
Mr. Juergen HIEROLD	UNIDO GEF Coordinator	UNIDO	**February 23, 2015** Vienna, Austria
Ms. Ganna ONYSKO	Officer at the UNIDO GEF Coordinator Unit	UNIDO	**February 23, 2015** Vienna, Austria
Mr. Alexander ORLOV	Procurement Officer	UNIDO	**February 20, 2015** Vienna, Austria
Mr. Aymen AHMED	Procurement Officer	UNIDO	**February 20, 2015** Vienna, Austria
Mr. Sam HOBOHM	Director, Office for Strategic Planning, Coordination and Quality Monitoring	UNIDO	**February 23, 2015** Vienna, Austria
Mr. Clemens PLOECHEL	International Consultant	Energy Changes	**February 26, 2015** Vienna, Austria
Mr. Alessandro AMADIO	UNIDO Representative	UNIDO Iran Office	**March 8, 2015** Tehran, Iran
Ms. Nasim SHEKARI	National Project Coordinator	UNIDO Iran Office	**March 7- 8, 2015** Tehran, Iran
Ms. Mahfam JAVANBAKHT	Technical Expert	UNIDO Iran Office	**March 8,11, 14**, **2015** Tehran, Iran
Mr. MEHDI SHARIF	Director of Industry	IFCO	**March 8,11, 14**, **2015** Tehran, Iran
Mr. Ali AZADMEHR	Lead expert	IFCO	**March 8,11, 14**, **2015** Tehran, Iran
Mr. SEADAT	Director General, GEF Focal Point in the Islamic Republic of Iran	Environment and Sustainable Development, Ministry of Foreign Affairs (MFA)	**March 8, 2015** Tehran, Iran
Mr. YAZDANI	Expert	Environment and Sustainable Development Ministry of Foreign Affairs (MFA)	**March 8, 2015** Tehran, Iran
Mr. KHANSARI	Expert	Environment and Sustainable Development Ministry of Foreign Affairs (MFA)	**March 8, 2015** Tehran, Iran

Dr. Mohsen Naseri	National Project Manager	Climate Change national project, Department of Environment	**March 14, 2015** Tehran, Iran
Mr.Edalati	Secretary of Energy committee	Department of Environment	**March 14, 2015** Tehran, Iran
Mr. Mohamad Mehdi Izadi	CEO	Ati Morvarid Pardis	**March 9, 2015** Tehran, Iran
Mr.Izadi	Shareholder	Ati Morvarid Pardis	**March 9, 2015** Tehran, Iran
Mr.Khazaei,	Head of EE Department	Esfehan Steel Company	**March 9, 2015** Tehran, Iran
Mr. Mohammad Reza DEHESTANI	Energy and engineering Manager	Regal Petrochemical Co.	**March 12, 2015** Mahshahr, Iran
Mr. Babak KHEIRKHAH	Senior expert in IMS (Integrated management systems)	Regal Petrochemical Co.	**March 12, 2015** Mahshahr, Iran
Mr. Nima SALAMI	Head of production planning and control	Regal Petrochemical Co.	**March 12, 2015** Mahshahr, Iran
Mr. Reza SHAHBAZI	Technical deputy of production manager	Regal Petrochemical Co.	**March 12, 2015** Mahshahr, Iran
Mr. Mohammad YAGHOBI	Deputy of production manager	Regal Petrochemical Co.	**March 12, 2015** Mahshahr, Iran
Mr. ALIABADI	Head of process	Regal Petrochemical Co.	**March 12, 2015** Mahshahr, Iran
Mr. Mohammad GHOTBIZADEH	Management Representative in Energy management	Oxin Steel Co.	**March 12, 2015** Ahwaz, Iran
Mr. Karim SABETI	Head of HSE	Oxin Steel Co.	**March 12, 2015** Ahwaz, Iran
Mr. Iman MOHAMMADZADEH	Head of production in cold zone	Oxin Steel Co.	**March 12, 2015** Ahwaz, Iran
Mr. Shahram AALIVAND	Manager of human resource and social affairs	Oxin Steel Co.	**March 12, 2015** Ahwaz, Iran
Mr. Mojtaba SOLEIMANI	Manager of engineering and technology department	Oxin Steel Co.	**March 12, 2015** Ahwaz, Iran
Mr. Amir DODABINEJAD	Deputy of training and Energy efficiency	SABA Organization	**March 10, 2015** Tehran, Iran
Mr. AKBARI SAYYAR	Manager of energy efficiency office	SABA Organization	**March 10, 2015** Tehran, Iran
Mr. Mehdi Rafiei	Energy Efficiency Expert	SABA Organization	**March 10, 2015** Tehran, Iran

Mr. Hasan Beigi	National EnMS and Energy Efficiency Expert	Free Lance Consultant	**March 11, 2015** Tehran, Iran
Ms. Mahnaz Sayyahi	National EnMS and Energy Efficiency Expert	Free Lance Consultant	**March 11, 2015** Tehran, Iran
Mr. Mahdi Shakouri	National EnMS and Energy Efficiency Expert	Free Lance Consultant	**March 11, 2015** Tehran, Iran

Annex C: Evaluation Matrix

Criteria/Issues	Questions	Indicators	Data Collection /Analysis Methods	Sources of Information
1.PROJECT RELEVANCE **To what extent are the project objectives and expected outcomes relevant to global, national and local development and environment strategies and priorities? i.e. Are the project objectives, outputs and outcomes with significance to:**				
(a) GEF focal area of climate change?	What are the project objectives, outputs and outcomes?	• Performance of the project against the planned targets as shown in the logical framework.	Document review	Project Logical Framework of Action
	Are the Project objectives, outputs and outcomes narrating the GEF climate change focal area?	• Existence of clear relationship between the Project objectives and the GEF climate change focal area	Document review	Project documents, GEF focal area strategies and documents UN-Policies and standards
	How is the market approach in promotion of industrial energy efficiency relevant to GEF climate change focal area?	• Evidence of values added in the GEF climate change focal areas.	Document Review	Project document
(b) Other donors who co-financed the project	How does the donor support to the project complement each other? Was the GEF funding support not addressed by other donors until now? / How does it fill the gaps?	• Degree to which Project is coherent and complementary to other donor programming • Is there co-ordination and complementarity between donors	Document review Interviews	Documents from other donors Other donor reps Project documents
(c) UNIDO Thematic priorities	Is the project in-line with UNIDO's thematic area?	• Objectives are consistent with UNIDO policies and lessons learned	Document review	UNIDO policies
(d) Address energy and development	• What are the national strategies and priorities in energy sector and development?	• Existence of clear relationship between the project objectives and outcome and the government	Document review	Project documents and reviews, national energy policies

Criteria/Issues	Questions	Indicators	Data Collection /Analysis Methods	Sources of Information
related challenges of Iranian government	• How is the project contributing to realization of such priorities and strategies?	policies and priorities		
(e) Needs of target groups	• Who are the project target beneficiaries? Were all identified? • What are the needs of target beneficiaries? • How is the project meeting the needs of target groups?	• Insights of target beneficiaries, including energy practitioners, project developers, government planners, fabricators, men and women in the project sites	Interview	Project stakeholders
	How is the project involving target beneficiaries?	• Level of participation of target beneficiaries in the project identification, implementation and monitoring	Document review	Project document, Project progress reports
(f) Changing environment i.e. does the project require any amendment to be in line with changes in the country and operational context	• Were there any amendments to project since its design to date? • If so, why and with what consequences? • Is the Project on track to meet its targets? • What lessons have been learned? • Which recommendations, if any, can be made based on the mid-term review to ensure the Project is on track to meet its targets?	• Number of amendments made to project design	Desk review Interviews	Project management documents UNIDO staff

Criteria/Issues	Questions	Indicators	Data Collection /Analysis Methods	Sources of Information
2. EFFECTIVENESS **To what extent were results at various levels, including outcomes, achieved?**				
(a) Attainment of project objectives and outcomes	• Which project milestones have been achieved towards intended objectives? • What have been the positive and negative outcomes in the target area since the beginning of the project? • What have been the positive and negative outcomes to the target beneficiaries (men and women) since the beginning of the project? • Which lessons have been learned by the project? • To what extent are the lessons attributed to the project?	• Percentage of achievement of objectives • Project intended and un-intended outputs • Existence of documented lessons and reflection the project	• Document review	Project progress report Project monitoring reports
(b) Attainment of Project impacts	• What planned and unplanned impacts of the project? • How are the impacts tracked? • Was the Project team aware of results based management/ adaptive management processes as originally set out in the Project design during implementation and were the same applied? • Has there been evidence of	• Evidence of changes been realized by beneficiaries • Existence of results based management/ adaptive management processes • Examples of modification and changes made in the project implementation	• Document review • Meetings with Project Management Unit (PMU) and beneficiaries	• Project M&E framework • PMU • Beneficiaries

Criteria/Issues	Questions	Indicators	Data Collection /Analysis Methods	Sources of Information
	flexibility in Project management? • Have any changes been made in response to the results based management/ adaptive management processes? • If so, (a) which changes were made, (b) for what purpose, and (c) with what results?			
Stakeholder inclusiveness and collaboration	• Who are the Project stakeholders and partners? • To date, has Project implementation been inclusive of the relevant stakeholders and collaboration between different partners identified in the Project strategy? • What means have been employed to ensure inclusiveness? (give concrete examples) • Are there stakeholders groups that the Project strategy failed to identify? If so, (i) which ones and (ii) why? • What are the opinions of stakeholders and target beneficiaries in relation to project outputs outcomes and impacts	• Extent to which the implementation of the Project has been inclusive of relevant stakeholders and collaboration between partners	Interviews	Stakeholders

Criteria/Issues	Questions	Indicators	Data Collection /Analysis Methods	Sources of Information
	How are the project partners fulfilling their roles and responsibilities?	• Evidence of timely delivery of the roles and responsibilities	Interview	Project Management Unit
Lessons learned	• Are there any reasons behind the extent of performance of the project? What are they?	• Existence of catalysts and bottlenecks to the performance of the project	Review	Project progress reports
3. EFFICIENCY **The extent to which results have been delivered with the least costly resources possible**				
(a) How and did the project outputs and outcomes deliver with least cost possible	To what extent do the project inputs (time, human and financial resources) were adequate and proportional with the realized outputs, outcomes? (i) Were the required funds in place when needed for implementation of activities? (ii) Were the non-financial resources (e.g. competent and skilled staff, facilities) available by the time needed for implementation of activities • If (i) and (ii) above were not in places which? And which measures were taken to address the situation? • Are there relevant partnerships for quality outputs?	• Overall investments (funding, time, other resources) • Extent to which level of co-financing has occurred compared to that planned • Timeline for implementation and completion of activities • Existence of memorandum of understanding for service delivery	• Financial document review • Interview with PMU • Contracts and Memorandum of understanding	• Project documents and reviews, other relevant docs • Project management team • Partners and stakeholders
(b) Are the project operations	• Was the quality and quantity of administrative and technical support by UNIDO HQ adequate	• Timely and adequate support from UNIDO HQ	• Interview with the project management team	• Project management team

Criteria/Issues	Questions	Indicators	Data Collection /Analysis Methods	Sources of Information
cost-effective and relative to the outputs, and achieved results	and timely? • Are the project activities in line with the schedule of activities as defined by the project work plan? If not, why? • Was the least cost options sought and applied during project implementation?	• Existence of effective communication systems • Percentage of implemented against planned activities • Perceptions as to cost-effectiveness of program	• Document review • Interview with stakeholders	• Project Logical Framework LFA • Project stakeholders
(c) Does the project management structure portray the cost effective and efficiency nature of project execution?	• How appropriate and effective are Project's management structure and staffing profile in realizing a relevant, effective, and efficient Project? What changes, if any, are needed to Project's organizational structure and staffing profile to carry out its mandate?	• Evidence of clear roles and responsibilities for operational and management structure • Degree of fulfilment of goals according to results framework (over evaluation period) • Client/Stakeholder satisfaction with Project staff	• Document review • Review • Interview	• Project documents and reviews, other relevant docs • Project partners, beneficiaries and stakeholders
(d) Is the project exercising an appropriate management accountability , monitoring and evaluation system	• How effectively has Project management accountability been exercised, and how well is M&E built into programming and strategy to strengthen accountability?	• Number and type of mechanisms or systems in place for holding Project management accountable for their roles and responsibilities	• Interviews	• Project-selected management
		• Examples of incidents when accountability measures or systems revealed mismanagement	• Interviews	• Project-selected management, staff

Criteria/Issues	Questions	Indicators	Data Collection /Analysis Methods	Sources of Information
		• Percentage of budget spent on M&E systems	• Desk review	• Project documents and reviews, other relevant docs
		• Evidence of use of M&E/reporting information to o make management decisions/adaptive management o inform strategy o inform programming or planning o others	• Interviews	• Project-selected management, including former Project program managers
		• Frequency of reporting, updating, or use of M&E systems for accountability purposes	Interviews	Project-selected management, including former Project directors,
4. SUSTAINABILITY **How likely is that the project will continue to deliver benefits after the GEF funding?**				
Financial risks	• Are there financial sustainability risks faced by the project? • If yes, what are they? • Are the mitigation strategies or other financing options identified and implemented? • If not, why and if yes what were the measures?	• Evidence/quality of sustainability strategy • Evidence/quality of steps taken to ensure sustainability • Evidence of likely commitments to support sectors beyond the end of the Project	Review	• Project progress report • Financial reports • Project management staff, stakeholders and beneficiaries.
Main sustainability risks	• What are the main risks to the expected sustainability of the benefits?	- Assumptions and risk assessment adequate - Mitigation measures identified and	• Document review • Discussions/ Meetings	• Project document and logical framework

Criteria/Issues	Questions	Indicators	Data Collection /Analysis Methods	Sources of Information
	• What are the mitigation measures to minimize the risks?	effected		• Government counterparts
5. MONITORING AND EVALUATION SYSTEMS				
Does the project have workable M&E framework?	• To what extent does the project have an effective monitoring, reporting and evaluation framework including measurable indicators, systematic and regular processes for collecting data, and feedback processes to facilitate decision making and learning?	• Project evaluation framework including indicators: o at the activity level measurable (achievable, reportable, timely, specific)	Review of documents	Project monitoring and Evaluation framework
		• Existence of mechanisms to receive feedback and make informed decision available	Review of documents	Project progress reports Monitoring and Evaluation framework
	• If the project has M&E framework does it include plan for tracking project impact after the project period?	• Existence of long-term impact monitoring framework • Existence of links of feedback mechanisms to government or other relevant monitoring and evaluation systems e.g. with rural electrification and poverty reduction	Review of documents Interview	Monitoring and Evaluation framework stakeholders
	• Is the M&E adequately funded and in a timely manner?	• Evidence of fund disbursement for M&E activities	Review of documents	Financial reports

Criteria/Issues	Questions	Indicators	Data Collection /Analysis Methods	Sources of Information
6.GENDER MAINSTREAMING **The extent to which socioeconomic benefits delivered by the project at national and local level consider gender dimensions**				
How is gender integrated in the project? (This criteria will be assessed throughout the evaluation assignments)	• Are gender and other social issues integral part of the project cycle? • Were gender needs for men and women identified? • Are there adequate resources (funds, methodologies, skills etc.) for mainstreaming gender available? • Is M&E framework gender inclusive?	• Gender analysis in project documents • Gender disaggregated data available	Document review	Project documents Monitoring reports
	What are the project positive and negative effects on women and men?	Evidence of women and men benefitted or not benefited from access to project opportunities and from project budget allocation	Review and Interview	Project monitoring reports Financial reporting Project staffing Project target beneficiaries
7. PROCUREMENT ISSUES **To what extent the procurement process abide to UNIDO procurement guidelines?**				
Was the procurement process in-line with UNIDO procurement guidelines?	• Was the procurement of goods and services fairly, efficient, effective, timely and transparent to the expected standards? • Was the procured process timely and cost effective? • Is the quality of the procured goods to the extent required?	• Evidence of efficient and timely delivery of project outputs	Review	Project goods and services delivery reports
Project	• How are project lessons	• Project reports outlining lessons	Document review	Project progress reports

Criteria/Issues	Questions	Indicators	Data Collection /Analysis Methods	Sources of Information
lessons	captured? • Are the lessons and outcomes shared among the stakeholders	• Communication strategies existing and implemented		

Annex D: Bibliography / Documents reviewed

1. “Industrial Energy Efficiency in Key Sectors in Iran”, Project document REQUEST FOR CEO ENDORSEMENT/APPROVAL, UNIDO from 25 May 2012
2. Terms of Reference, Independent Mid-Term Review of the UNIDO Project, “Industrial Energy Efficiency in Key Sectors in Iran”
3. UNIDO Annual Project Implementation Review (PIR) of the project: “Industrial Energy Efficiency in Key Sectors in Iran”, 01.07.2012.-30.06.2013
4. UNIDO Annual Project Implementation Review (PIR) of the project: “Industrial Energy Efficiency in Key Sectors in Iran”, 01.07.2013.-30.06.2014
5. Investment potentials in Energy Conservation in Iran, published by IFCO, 2015
6. National Productivity indicators report (1997-2014), published by National Iranian Productivity Organization, 2015.
7. Review Global Energy Efficiency & intensity indicators published by National Iranian Productivity Organization, 2015.
8. http://www.saba.org.ir/fa/home
9. http://www.ifco.ir/
10. http://nipo.spac.ir/Portal/Home/Default.aspx?CategoryID=6c9f8f7f-922b-4384-84e0-717c7eef973e
11. Report on Policies, Legislation and strategies for Energy Efficiency, Industrial Energy Efficiency project in I.R. Iran