



PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Medium-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title:	Industrial Energy Efficiency Improvement in South Africa through Mainstreaming the Introduction of Energy Management Systems and Energy Systems Optimization		
Country(ies):	South Africa	GEF Project ID: ¹	5379
GEF Agency(ies):	UNIDO	GEF Agency Project ID:	120487
Other Executing Partner(s):	Department of Energy, Department of Trade and Industry and Department of Environmental Affairs, Republic of South Africa	Submission Date:	2013/04/11
GEF Focal Area (s):	Climate Change	Project Duration (Months)	48
Name of parent program (if applicable):	N/A	Project Agency Fee (\$):	548,766
	<ul style="list-style-type: none"> • For SFM/REDD+ <input type="checkbox"/> • For SGP <input type="checkbox"/> • For PPP <input type="checkbox"/> 		

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK²:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCM-2 Energy Efficiency: Promote market transformation for energy efficiency in the industrial and buildings sectors	GEFTF	5,776,484	27,600,000
Total Project Cost		5,776,484	27,600,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: To accelerate and expand the introduction of Energy Management Systems (EnMS), Industrial Energy Systems Optimization (ESO), and the Energy Management Standard ISO50001 within the South African industrial (and selected commercial) context in order to realize increased investment in industrial energy efficiency through the wide-scale adoption of the two methodologies and ISO 50001 under (i) enhanced institutional frameworks and regulatory environments, (ii) technical and implementation assistance to industry and (iii) multi-level engineer, technician and operator capacity building programmes.

Project Components	Grant Type ³	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
1.0 - Industrial sector mapping of key strategic and highly energy consuming sub-sectors, with EnMS and ESO benchmarking	TA	Government is better able to design and develop industrial energy efficiency (and industrial energy related GHG emission) policy / legislation / regulation through industrial sector energy mapping and benchmarking against international best-practices and best	<p>1.1. A structural and detailed sector-wide industrial energy consumption and intensity map built-up from selected highly energy consuming sub-sectors, and the enterprises contained within them, in terms of the energy reduction potentials presented by EnMS and ESO implementation.</p> <p>1.2. Industrial sub-sector level EnMS and ESO benchmarking assessment, and DoE rolling reassessment mechanism, for determining the energy intensity/energy efficiency performance of each industrial sub-sector (and</p>	GEFTF	400,000	1,600,000

¹ Project ID number will be assigned by GEFSEC.

² Refer to the reference attached on the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

³ TA includes capacity building, and research and development.

		available technology scenarios.	selected commercial sub-sectors) relative to international EnMS and ESO best practice benchmarks with DoE criteria for energy intensity reduction target setting as part of the DoE 'Energy Management Planning' policy/regulatory process.			
2.0 - Industrial energy efficiency policy and regulatory framework strengthening with a focus on 'Energy Management Planning (EnMn Planning)'	TA	Enhanced promotion of investment in industrial energy efficiency (ESO measures and EnMS implementation) through strengthened policy and regulatory frameworks – with a focus on EnMn Planning, where EnMn Planning become the industry accepted norm with their incorporated and Government approved energy intensity reduction targets.	<p>2.1. Technical capacity enhancement programme for South African institutions responsible for the development, implementation and monitoring of national industrial energy intensity, usage and supply security. DoE "EnMn Planning" needs/capacity assessment and capacity building initiatives/activities (with dti complimentary activities related to access to financial incentives). Supporting materials for the development by Government of appropriate EnMn Planning regulation development and accompanying implementation, monitoring and evaluation/assessment instruments.</p> <p>2.2. Enterprise technical training and support packages (incl. on-site assistance) on EnMn Plan development and internal energy intensity reduction target setting.</p>	GEFTF	750,000	3,000,000
3.0 - EnMS and ESO training and capacity building programme for industrial enterprise personnel and the Engineering Consultancy Base, with extension into South African educational structures	TA	The capacity of the South African industrial sector, and the industrial consulting base, is strengthened in regard to EnMS and ESO, under an institutional framework for career development.	<p>3.1. Training / capacity building courses on EnMS and ESO subjects for South African industry personnel at: (i) the engineering and managerial level and (ii) technician / plant operator staff. Both levels of the courses will include ESO training on selected new topics (e.g. process heating, refrigeration, smelting), and will be accompanied by industrial enterprise EnMS and ESO technical support and resource packages / toolkits / learning materials.</p> <p>3.2. Support programme for EnMS and ESO Expert Level Training Course Graduates, including post-graduation hosting at multiple industrial enterprises (under expert supervision/guidance) to enhance on-site ESO application experience.</p> <p>3.3. South African accredited EnMS and ESO training courses, both by relevant professional bodies/associations and by Government higher education institutions, with the latter encompassing selected (or all) course subjects built into the national higher education course option curriculums.</p>	GEFTF	1,950,000	8,000,000
4.0 – Investment promotion in industrial energy efficiency improvement	TA	Industry is aware and actively pursuing significant energy savings, through investment in EnMS/ ESO / ISO50001	4.1. Approximately 150 individual enterprises of different sizes across multiple industrial and selected commercial sectors implement EnMS and/or ESO, either together as a package or as separate methodologies through technical support.	GEFTF	1,576,484	0

through EnMS and ESO piloting within the South African Industrial and Selected Commercial Sectors	INV	methodology applications The beneficial application, in terms of energy and cost savings, of EnMS and ESO within the South African industrial context is proven and disseminated.	(i) A large enterprise EnMS and/or ESO pilot programme component focused on heavily industrialized municipalities and Industrial Development Zones (IDZs) - 50 pilots. (ii) An SME EnMS and/or ESO pilot cluster (again IDZs and other SME concentration areas) programme component, with long-term support for the EnMS implementation option - 100 pilots.	n/a	0	10,250,000
5.0 – Industry and commercial EnMS and ESO awareness, promotion and service demand generation.	TA	Enterprise management (across the entire South African industrial sector, and selected commercial sectors), is aware of the potential financial, economic and climate change mitigation benefits that adopting EnMS and ESO can yield.	5.1. Large-scale multi-sector and single sector joint Government/business/project EnMS and ESO publicity events/workshops/corporate briefings etc. 5.2. Detailed case studying of both the completed ‘SA Gov/DFID/SECO IEE Project’ EnMS and ESO demonstration enterprises and the new GEF Project EnMS and ESO pilot programme enterprises. 5.3. An EnMS and ESO multi-media campaign i.e. South African industry/engineering journals, TV, radio, Internet and selected national newspapers, including wide-scale and targeted canvassing of selected industrial and commercial sub-sectors.	GEFTF	750,000	3,000,000
6.0 – ‘Project Monitoring and Evaluation’ and ‘Rolling EnMS/ESO Implementation Impact Assessment’	TA	The project and all its stakeholders are fully able to monitor and evaluate the project’s progress allowing for a rolling EnMS/ESO national implementation Impact Assessment based on the ‘Theory of Change’ methodological approach.	6.1. A full Monitoring and Evaluation (M&E) mechanism (consisting of multiple parts as determined by the operational counterparts of each the project’s components and their focus), installed from the outset of the project. The M&E mechanism will monitor performance/delivery against the project’s work plan and also monitor/collect information/results/feedback on key indicators for EnMS and ESO implementation across the country. 6.2. A rolling national EnMS/ESO implementation Impact Assessment (IA), using the EnMS/ESO indicator results as determined under the M&E mechanism. A M&E facilitated and evolving project ‘Theory of Change’ over the project’s lifetime. IA half yearly and annual review and reports – and post project completion impact assessment(s).	GEFTF	100,000	200,000
			Sub-Total		5,526,484	26,050,000
			Project Management Cost (PMC)⁴		250,000	1,550,000
			Total Project Costs		5,776,484	27,600,000

⁴ To be calculated as a percentage of subtotal

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Source of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
GEF Agency	UNIDO	Grant	110,000
GEF Agency	UNIDO	In-kind	200,000
National Government	Department of Energy	Grant	100,000
National Government	Department of Energy	In-kind	400,000
National Government	Department of Trade and Industry (Dti)	Grant	6,840,000
National Government	Department of Environmental Affairs	In-kind	50,000
Other	SANEDI	In-kind	400,000
Other	NCPC	In-kind	500,000
Private Sector	Enterprises	Grant	8,000,000
Private Sector	Financial institutions	Grant	2,250,000
Bilateral Aid Agency(ies)	SECO	Grant	5,050,000
Bilateral Aid Agency(ies)	DFID	Grant	2,500,000
Bilateral Aid Agency(ies)	Unknown at this stage	Grant	1,000,000
Other		Grant	200,000
Total Co-financing			27,600,000

D. INDICATIVE TRUST FUND RESOURCES (\$) REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (\$ (a))	Agency Fee (\$ (b) ²)	Total (\$) c=a+b
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total Grant Resources				0	0	0

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

² Indicate fees related to this project.

E. PROJECT PREPARATION GRANT (PPG)³

Please check on the appropriate box for PPG as needed for the project according to the GEF Project Grant:

	<u>Amount Requested (\$)</u>	<u>Agency Fee for PPG (\$)⁴</u>
• No PPG required.	_____	_____
• (up to) \$50k for projects up to & including \$1 million	_____	_____
• (up to)\$100k for projects up to & including \$3 million	50,000	4,750
• (up to)\$150k for projects up to & including \$6 million	_____	_____
• (up to)\$200k for projects up to & including \$10 million	_____	_____
• (up to)\$300k for projects above \$10 million	_____	_____

PPG AMOUNT REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES) FOR MFA AND/OR MTF ROJECT ONLY

Trust Fund	GEF Agency	Focal Area	Country Name/Global	(in \$)		
				PPG (a)	Agency Fee (b)	Total c = a + b
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total PPG Amount				0	0	0

MFA: Multi-focal area projects; MTF: Multi-Trust Fund projects.

³ On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁴ PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

PART II: PROJECT JUSTIFICATION⁵

A Project Overview

A.1. Project Description. Briefly describe the project, including ; 1) the global environmental problems, root causes and barriers that need to be addressed; 2) the baseline scenario and any associated baseline projects, 3) the proposed alternative scenario, with a brief description of expected outcomes and components of the project, 4) incremental cost reasoning and expected contributions from the baseline , the GEFTF, LDCF/SCCF and co-financing; 5) global environmental benefits (GEFTF, NPIF) and adaptation benefits (LDCF/SCCF); 6) innovativeness, sustainability and potential for scaling up.

I) According to the Fourth Assessment Report of the International Panel for Climate Change (IPCC AR4), global greenhouse gas (GHG) emissions have grown since pre-industrial times, with an increase of 70 per cent between 1970 and 2004. These emissions will continue to grow over the next few decades if current climate change mitigation policies and related sustainable development practices are kept up. South Africa is party to the United Nations Framework Convention on Climate Change (UNFCCC) and as such committed to reducing GHG emissions through active mitigation measures. As the industrial sector is the largest energy consumer in South Africa, accounting for 38% of total final energy use and 57% of all electricity consumption in 2009, the need for increased promotion and implementation of energy efficiency within industry cuts across all relevant national policies and strategies that address sustainable economic development and climate change mitigation in South Africa. The South African government has therefore prioritized the implementation of industrial energy efficiency and greenhouse gas emission mitigation through various policies and strategies.

As a result of the national power crisis that started in 2007, industrial energy performance has improved over the past years to some degree, especially in the larger enterprises. This is a result of increased policy-maker attention to energy efficiency and increasing energy and electricity price increases, with the latter ending the historical situation of cheap and plentiful industrial energy. However, Government technical capacity for IEE policy-making and implementation, and industry's ability to take onboard new energy efficiency methodologies remains significantly constrained.

Government IEE policy and regulatory development is constrained by a lack of human resources, and expertise to develop and implement substantive and effective policies and programmes to promote and support energy efficiency in industry, while in industry a large majority of enterprises still have limited awareness and understanding of the financial and qualitative benefits that general energy efficiency, and EnMS and ESO specifically, can yield. This lack of information about and understanding of what is technically feasible and what is commercially viable is a result of a number of factors. Firstly, until the beginning of the power crisis in 2007 and the subsequent hikes in power and energy prices combined with Government power demand reduction initiatives, enterprises did not have any real commercial need to undertake energy efficiency improvement or investment. Therefore, a state of inertia still remains to some degree within the sector; secondly, technical expertise of industrial staff is concentrated on key equipment and attention is focused exclusively on reliability and its contribution to production, with very little or no understanding being placed on the impact of different operations on energy performance. As a result of factors such as these within the vast majority of South African enterprises, there is still a lack of structured approaches to managing energy usage. Lastly, there are limited structured industrial energy efficiency promotion, dissemination and education programmes on a scale that can make a significant impact.

2) South Africa can be classed as a relatively energy intensive economy. In fact it is one of the top twelve most energy intensive economies (no. eleven) in the world in terms of commercial energy intensity. This is due to the fact that the economy is still heavily structured around or dominated by energy intensive large-scale operations, such as mining and primary minerals beneficiary industries. According to the South Africa Government's Department of Energy, South Africa's total primary energy production/supply in 2009 stood at 6,364PJ, up from 4,295PJ in 2000, a 32.5% increase, while total primary energy consumption increased from 2,193PJ in 2000 to 3,236PJ in 2009, a 32.2% increase. This level of energy supply and consumption ranks South Africa within the top 20 for both parameters in the world. As result of a growing population and a growing economy, energy demand in South Africa will continue to grow unless interventions are implemented to greatly increase the level of efficiency with which energy is applied throughout the country. The present business-as-usual increase rate of approximately

⁵ Part II should not be longer than 5 pages.

3.5% in annual energy consumption means that by 2030 energy demand in South Africa might reach approximately 6,500PJ.

The main consumer of energy in South Africa is the industrial sector, accounting for 41% of all energy consumed and almost 57% of all electricity consumed. In terms of industrial sectoral energy consumption, the largest consuming sectors are: Mining and Quarrying, Iron and Steel, Petrochemicals, Cement, Aluminium and manufacturing (e.g. car production). When considering electricity consumption, steel plants are the largest consumers of power within the industrial sector along with gold mining, cement and brick and tile manufacturing.

As a result of South Africa's reliance on coal for power generation coupled with the energy intensive nature of its economy, national emissions of CO₂ from the consumption of fossil fuels stood at 443.58 million metric tons in 2008, ranking it 12th in the world (*source: EIA*). As can be expected from the dominance of the industrial sector in terms of total national energy consumption, total GHG CO₂ equivalent emissions from the industrial sector are a large portion of South Africa's total national GHG CO₂ equivalent emissions.

South Africa, with its unique and troubled past, has a legacy of unemployment within the majority population and there remains a pressing need for the national economy to diversify and expand in order to create jobs to the required level. To compound the shortage of jobs, South Africa can be considered a medium cost country in regard to labour and therefore its manufacturing base competes against lower labour cost countries, thereby putting further pressure on employment. Therefore, employment is a top priority of the South African Government as socially and economically inclusive employment is a key driver to alleviate poverty within the majority population and to ensure long-term social stability. Industrial energy efficiency can play a significant role in contributing to the Government's objective of employment creation and protection by lowering production costs, and hence boosting competitiveness.

Baseline Project: The proposed GEF project will build on the work of the UNIDO implemented South African Government/UK Department for International Development (DFID)/Swiss State Secretariat for Economic Affairs (SECO) funded "*Industrial Energy Efficiency Improvement in South Africa Project (SA Gov/DFID/SECO IEE Project)*". This project began its implementation in April 2010 and is scheduled for completion at the end of March 2014. While the project contains a number of different components, the actual industrial energy efficiency concepts/methodologies being introduced and demonstrated in South Africa are: (1) Energy Management Systems (EnMS); (2) the new international Energy Management Standard ISO50001; and (3) Industrial Energy Systems Optimization (ESO).

The SA Gov/DFID/SECO Project currently focuses on five key industry sectors which have the potential to bring about significant reductions in the overall energy consumption of the country. These are agro-processing, chemicals and liquid fuels, metals processing and engineering, automobile production, and mining. The project has four main components. Component One works within the policy area where the project assisted the Department of Energy to develop the 3rd Revision of the 'South Africa National Energy Efficiency Strategy (NEES)'. The project is now moving to conduct preliminary planning and scoping work on how best to operationalize the NEES objectives. Under Component Two, the project supported the Government and relevant institutions with the introduction of the Energy Management Standard i.e. ISO50001. The project is also training the first group of ISO50001 Lead Auditors. Under Component Three, the project has developed a series of training packages which were offered to industry and the industrial consulting sector, with the first training courses having started in August 2010. With the support of international experts hired by UNIDO and local experts trained through the programme, the project has to date a number of workshops on Energy Management System (EnMS) and System Optimization (ESO). Those trained included energy experts, consultants, engineers and government officials. The courses offered were on the following topics: (i) Energy Management Systems; (ii) Steam Systems Optimization; (iii) Compress Air Systems Optimization; (iii) Fans Systems Optimization; (iv) Pumping Systems Optimization; (v) Motor Systems. Under Component Four, the project embarked on a process of initial awareness creation and a company recruitment programme, by means of media articles, presentations at relevant events and meetings with key stakeholder institutions in the targeted provinces.

The SA Gov/DFID/SECO IEE Project has achieved a significant level of success; it has introduced the industrial energy efficiency concepts of EnMS and ESO into the South African industrial context and with the small number of companies that it has worked with, the project has generated real and significant savings in terms of energy, money and GHG emissions. However, given the size of the South African industrial sector, it has only scratched the surface in terms of potential energy savings that can be realized through EnMS and ESO and primed the ground for

a follow-up initiative to build on the introductory work that has been conducted, to link EnMS and ESO technical assistance with the Government's new financial incentives for industrial energy efficiency/savings and expand the implementation of EnMS and ESO throughout the industrial sector and beyond to relevant commercial sectors.

As such, the proposed GEF project described in this document aims to mainstream and greatly expand the introductory work presently being carried out under the SA Gov/DFID/SECO IEE Project and to disseminate the concepts of EnMS/ISO50001/ESO right across the South African industrial and selected commercial sectors. The proposed GEF project will develop policy and regulatory measures, and the accompanying industry technical support tools, which will place EnMS and ESO in the centre stage in the national drive to improve industrial energy efficiency while at the same time ensuring increased competitiveness.

Specially the GEF Project will assist the South African Government in its efforts to follow-up the 3rd Review of the NEES and develop the regulatory environments, based on clear national industrial energy consumption understanding facilitated through sub-sector mapping and benchmarking, that are necessary to promote the wide-scale uptake of EnMS and ESO within a broader drive to increase national industrial and commercial energy efficiency. In regard to the commercial sector, the GEF Project will target commercial enterprises that have mostly the option to implement EnMS within their facilities and secondly those other enterprises that are large enough and complex enough to have a degree of ESO potential. At the same time the project will aim to supply industry with the necessary EnMS and ESO capacity and support to effectively implement these energy efficiency methodologies. Lastly, the project will seek to institutionalize the EnMS and ESO methodologies into the relevant South African professional body/association and higher education structures so as to ensure sustainability and wide-scale accessibility for existing and future industrial enterprise and consultancy personnel. In terms of building on, and contributing to, existing and planned financial incentive schemes (operated by both central Government and institutional entities) that have a focus on energy efficiency, the proposed GEF Project will seek to build the abilities of enterprises to develop the necessary industrial energy efficiency improvement projects and bankable proposals with which they can approach the different financial schemes. The GEF Project would from its outset partner with these different financial schemes in order to align all relevant project activities and the industrial enterprise support materials they intend to produce to the requirements of the different energy efficiency improvement financial incentive schemes.

The project will therefore be one of the main tools by which the Government will aim to achieve the 15% energy intensity reduction target for the industrial sector as set out in the 2012 3rd Revision of the South African National Energy Efficiency Strategy (NEES), while at the same helping the industrial sector to remain viable and a driver of national GDP growth and employment.

3) Project Approach and Incremental Project Activities

The Project will accelerate and expand the introduction of Energy Management Systems (EnMS), the Energy Management Standard ISO50001 and Industrial Energy Systems Optimization (ESO) within the South African Industrial (and selected commercial) context in order to realize increased investment in industrial energy efficiency through the wide-scale adoption of the two methodologies in concert with the ISO50001 Standard.

Component 1.0: Industrial Sector Mapping of Key Strategic and Highly Energy Consuming Sub-Sectors, with EnMS and ESO Benchmarking – This component will assist the Government (under the DoE) in gaining a structural and detailed picture of industrial energy consumption across the many different industrial sub-sectors and the enterprise size ranges within each sub-sector as well as the issues surrounding industrial energy as experienced by enterprises. The different sub-sectors, and enterprise size ranges, will then be benchmarked in terms of their energy performance/intensity against corresponding international EnMs and ESO best-practice and scenarios.

Output 1.1 – Industrial Sector Energy Intensity Baseline Mapping: In order for the Government to adequately assess the industrial enterprise Energy Management Plans, and their contained intensity reduction targets, there must be a very clear energy baseline mapping assessment of major industrial sub-sectors that will be covered by eventual EnMS Planning regulation. The proposed energy mapping baseline study will provide a detailed and in-depth picture of each industrial sub-sector and their energy-use dynamics and therefore they will go far beyond national aggregate GHG mapping contained under GHG baseline assessments. This study will provide an accurate picture of the challenges and potentials that exist within each sub-sector in terms of EnMS and ESO. This will then be related back to the national energy intensity reduction goals contained within the 3rd Revision of the NEES and to the GHG calculations of the NCCRS.

Output 1.2 – Industrial Sector Benchmarking: The second part of this component will be to conduct an EnMS and ESO Benchmarking Assessment across the different sectors targeted under the Industry and Mining Action Plan contained within the NEES. This study is required in order to enable DoE to properly assess the submitted energy management plans and their contained energy intensity reduction targets. The benchmarking programme would look at best-practice both internationally and nationally as well as considering theoretical technical energy efficiency potentials.

The mechanisms developed for these purposes will be repeating and updating in nature so that the DoE will be able to periodically review the process of energy intensity reduction and the upgrading of the selected industrial sub-sector in terms of energy practices and applied technology. The main institutional body for this activity will be the South African National Energy Development Institute (SANEDI) under the Department of Energy. Capacity building assessments and building initiatives will be initiated under this component. Completion of these two activities will provide the DoE with the necessary data to properly target and assess the proposed EnMn Plans from industrial enterprises

Component 2.0: *Industrial Energy Efficiency Policy and Regulatory Framework Strengthening with a focus on ‘Energy Management Planning (EnMn Planning)’* – This component will assist the Government in the development of policy and regulations that will foster increased investment in industrial energy efficiency, particularly under the EnMS and ESO methodologies, while at the same time assisting industry to meet the requirements of this new regulation through technical support packages and direct on-site assistance. The leading policy/regulatory initiative that the Government is committed to undertake is contained under the 3rd Review of the NEES Implementation Plan for the Industry and Manufacturing Sector is to develop, publish and enforce a mandatory requirement that all enterprises with a significant degree of energy consumption develop and submit an ‘*Energy Management Plan (EnMn Plan)*’ for their enterprise, with this plan containing self-set energy intensity reduction targets. The DoE would then review these Energy Management Plans, and their contained targets, and decide whether or not to approve the plan and its targets.

Output 2.1 – Institutional Needs Assessment and Capacity Building for Industrial Energy Efficiency Policy and Regulation Frameworks: Under this output an institutional needs assessment will be conducted which will determine the capacity gaps within the Government (the DoE and others if required) in regard to developing and implementing the EnMn Planning regulation. From the results of the assessment, a corresponding capacity building programme will be put in place.

Output 2.2 – Development of EnMn Plan Industrial Enterprise Support Materials and On-site Assistance: Under this output an enterprise support package will be developed to assist enterprises on how to prepare appropriate EnMn Plans, and their contained energy intensity reduction targets, for submission to the DoE. The guidelines contained within the packages will ensure that the EnMn Plans submitted will be in line with the requirements of the relevant Government and other financial incentive schemes that have a focus on financing energy efficiency investment. The second part of the output will offer an enterprise training programme on energy management and Energy Management Plan development for submission with contained internal targets based on realizable energy saving potentials within the company in question.

Component 3.0: *EnMS and ESO Training and Capacity Building Programme for Industrial Enterprise Personnel and the Engineering Consultancy Base, with Extension into South African Educational Structures for Institutionalized Technician/Operator Training* – This component will build the EnMS and ESO capacity of the South African industrial sector and the engineering consulting base that services it at multiple levels of employee experience and responsibility. The existing SA Gov/DFID/SECO IEE Project has started this process but by the close of its training and capacity building programme, the vast majority of South African industrial (and relevant commercial) enterprises will remain untrained. Furthermore, there is a growing strong demand by industry for training on additional ESO subjects not included under the existing project (e.g. smelting, foundry systems, refrigeration) as well as a need to expand the trainee scope to technicians and, machinery operators and process line managers. Lastly, in order to ensure that the EnMS and ESO methodologies become firm fixtures within the South African industrial culture there is a need to fully institutionalize the different courses at both the higher engineering and lower technician/operator levels under an institutional framework of career development and higher learning.

Output 3.1 – EnMS and ESO Industry Training and Capacity Building: Under this output the proposed GEF Project will conduct a series of EnMS and ESO courses (including new course topics, such as process heating,

refrigeration, smelting etc.) in order to meet the demand for such training from industry and the industrial consultancy base. Under this output the GEF Project will also develop a series of EnMS and ESO support and resource packages/materials for industrial enterprises to firstly better implement EnMS and secondly to identify and develop potential ESO projects/measures. Moving beyond the engineering and managerial level of staff, under this output EnMS and ESO training and capacity building courses will also be developed and implemented for enterprise technicians and operators in order to promote EnMS and ESO understanding and acceptance right across the relevant industrial enterprise employee base. Lastly under this output, the GEF Project will address the EnMS implementation needs of the SME sector. EnMS implementation within SMEs can present specific issues and challenges and therefore, a SME EnMS Implementation Guide will be produced for distribution throughout the South African SME sector.

Output 3.2 – EnMS and ESO Expert Course Graduate Industrial Experience Support: Under this output EnMS, and in particular ESO, expert course graduates will be given the opportunity to undertake extended periods of on-site industrial experience by being presented with a series of ESO scenarios to work through and develop under the mentorship/guidance of senior experts in that particular field. For this output, the proposed GEF Project would seek to partner with, and to be partly funded by, the South African Government's higher education funding schemes where large public enterprises are mandatorily obliged to facilitate adult professional education/training of both their workers and non-staff.

Output 3.3 – Institutionalization of EnMS and ESO Training and Capacity Building Course Contents: Under this output all of the courses to be offered by the GEF Project will be institutionalized under South African professional and higher education institutions and structures. The new ESO engineer/plant manager courses will be accredited under the 'Continuous Professional Development (CPD)' system operated by the Engineering Council of South African as established by the 'Engineering Professions Act of 2000'. All the EnMS and ESO engineering courses, and their associated materials, will be taken through the National Qualification Framework (NQF) process under the South African Qualifications Authority. The NQF process is a multi-stakeholder process including CSOs, educational bodies, Government and many others. The lower level technician/operator courses will be included into vocational programmes under the Department of Higher Education, again within the NQF process under the South African Qualifications Authority.

Component 4.0: Investment Promotion in Industrial Energy Efficiency Improvement through EnMS and ESO Piloting within the South African Industrial and Selected Commercial Sectors – This component will increase investment in industrial energy efficiency under the EnMS and ESO methodologies, both directly through the development of pilot EnMS/ISO50001/ESO enterprises and indirectly through the dissemination of the pilot experiences (and the benefits realized) to the rest of the industrial and selected commercial sectors.

Output 4.1 – EnMS and ESO Piloting: Under this output the project will aim to work directly with approximately 150 industrial enterprises to implement combinations of EnMS and ESO initiatives. To focus the projects resources in a way that will maximize the impact of the adoption of EnMS/ISO50001/ESO and generate the best possible reductions in energy and GHG intensity, the project will focus its attention firstly (though not exclusively, as the project will be a national initiative) on large municipalities and secondly on Industrial Development Zones (IDZs), concentrating on the project awareness, training, piloting and showcasing activities as such. Of the 150 enterprises, 50 will be large enterprises with considerable energy and GHG emissions profiles where the project would aim to undertake both wide-ranging ESO interventions and EnMS implementation. The remaining 100 enterprises will consist of SMEs with significant energy usage and production costs. The piloting and showcasing activities will form sector specific EnMS and ESO case studies which will be promoted through various means to as wider an audience as possible of enterprise management.

The presence of new established funding mechanisms which have energy efficiency promotion focuses or components, especially the US\$ 750 Million '*Manufacturing Competitiveness Enhancement Programme (MCEP)*' negate the need for the proposed GEF Project to establish its own dedicated financing mechanism. Rather the GEF Project will seek from its outset in the PPG stage to integrate its work and functionalities into the MCEP and other relevant financial funds/mechanisms so that the EnMS and ESO technical assistance provided to enterprises is applicable in format, content and design to the entry requirements of the financial mechanism(s). The proposed GEF Project will assist enterprises in developing bankable energy efficiency projects in cooperation with these funds under formats and parameters that will facilitate the funding of the developed enterprise projects. In this way these funding mechanisms will actively support the EnMS and ESO piloting activities of the project and their wide-

scale replication. By partnering with MCEP (and other suitable large-scale financing mechanisms, such the US\$ 65 million 'KfW/Industrial Development Corporation (IDC) Green Energy Fund') will help secure MCEP's own continuation and eventual expansion – thereby promoting indirect benefits over the long-term. The GEF project's sub-sector pilots, as well as the different industrial project development support activities will provide enterprises with an incentive and ability to successfully approach MCEP and other available funding mechanisms with appropriate project investment proposals thereby creating a mutually beneficial relationship between the GEF project and the MCEP (and other mechanisms).

Component 5.0: *Industry and Commercial EnMS and ESO Awareness, Promotion and Service Demand Generation* – this component will build awareness in regard to the potential that EnMS and ESO can deliver in terms of financial, energy, GHG emission savings within the South African industrial sector and the relevant parts of the commercial sector, thereby building demand for the GEF Project training/capacity building and pilot services.

Outputs 5.1, 5.2, and 5.3: These component activities will consist of a range of media, trade and industry avenues such as regional industrial events and seminars/workshops, pilot site visits, minimal cost co-sponsoring of other national IEE events, industry/Gov minister events (incl. for example industry leader/ Government Minister level events), instructional and promotional movies for TV, tailored and target sectoral information packs e.g. steam and pumping ESO promotional and facts and figures packs for the oil refining sector.

Component 6.0: 'Project Monitoring and Evaluation (M&E)' and 'Rolling EnMS/ESO Implementation Impact Assessment (IA)' – The objective of this expanded M&E component is to facilitate a detailed and extensive M&E structure to be put in place under the project. Unlike other EnMS and ESO projects in other countries where the concepts are being introduced into environments with no previous EnMS/ISO50001/ESO exposure, no institutional arrangements and no project implementation units/entities/teams being in place, the proposed GEF Project for South Africa would be starting in an environment where the initial groundwork for sector-wide expansion has already been laid down by the SA Gov/DFID/SECO IEE Project. Therefore, the GEF Project can seek to expand the EnMS and ESO methodologies on a large-scale and at a relatively rapid pace and engage a project impact assessment methodology early on in the project's implementation. The analysis of the M&E and IA results of the different components will allow for periodic reviews of the project's 'Theory of Change' and subsequent implementation strategies and work plans. Beyond this, the GEF Project would also come under defined period project implementation reporting based on GEF/UNIDO templates (MTR/PIR/final PIR).

4) Reducing CO₂ emissions through improving industrial energy efficiency is one of the most cost effective methods of reducing GHG emissions, and thereby combating climate change. It has been demonstrated that one of the most cost-effective ways of maximizing commercial profitability is the adoption of appropriate energy efficiency measures. While addressing barriers to increased and sustainable energy efficiency in industry, the outputs and outcomes of the proposed GEF Project are expected to deliver substantial reduction of GHG emissions. The project will lead to considerable energy savings and GHG emission reductions through Project Components 2.0, 3.0 and 4.0. The project will produce direct GHG emission reductions through the implementation of EnMS and ESO, the technical capacity built and the implementation of EnMS general energy efficiency interventions taken within the participating enterprises throughout the projects duration. Indirect reductions will accrue from the replication and dissemination of the EnMS and ESO methodologies across the industrial and selected commercial sectors and through widely promoting the EnMS and ESO experiences of the 150 pilot enterprises. Indirect energy consumption and GHG emission reduction will also occur as a result of the policy and regulatory technical assistance that will create a more supportive enabling environment for industrial energy efficiency – particularly the introduction of mandatory Energy Management Planning by industrial enterprises.

5) Based on initial calculations, using the experience of the SA Gov/DFID/SECO IEE Project's demonstration EnMS and ESO projects, the GEF Project can expected to realize direct GHG emission reductions of an approximate level of 1,000,000 tons of CO₂eq over its four year lifetime through its pilot EnMS and ESO activities. This direct emissions mitigation figure is based on an expected energy saving of 1,000GWh over the lifetime of the project and the carbon intensity of the South African national grid which is approximately 1.0kWh to 1.0 Kg of CO₂eq. Indirect GHG emission reductions over a ten year period can be expected to be in excess of 4.5 to 5.0 tons of CO₂eq – especially if the partnering with the MCEP and other funds prove as successful as planned. The

institutional framing of the different courses will also result in significant indirect benefits as this will hardwire EnMS and ESO into the industrial skills base. During the PPG phase these calculations and estimates will be examined in detail and justified.

6) The proposed UNIDO/GEF project can be considered quite innovative as the EnMS and ESO IEE methodologies are still relatively unknown throughout the South African industrial sector where they generate considerable interest and enthusiasm within the engineering fraternity upon exposure to them. The SA Gov/DFID/SECO IEE Project has been unable with its existing resources to meet the demand for training on EnMS and the different ESO topics. The GEF project will also be initiating a number of completely new ESO courses which are not presently in existence globally. In terms of ensuring sustainability in regard the long-term and wide-scale adoption of the EnMS, ESO and the ISO 50001 Energy Management Standard, the proposed project will firstly institutionalize its training courses under South African professional and higher education institutions and structures. The engineer/plant manager courses will be accredited under the ‘Continuous Professional Development (CPD)’ system operated by the Engineering Council of South Africa as established by the ‘Engineering Professions Act of 2000’, while the lower level technician/operator courses will be included into vocational programmes under the Department of Higher Education. Secondly, the project will tailor its relevant outputs to the eligibility criteria and requirements of different national financing mechanisms that are tasked to promote increased industrial energy efficiency. In terms sustainability, partnering with the MCEP and other appropriate financing mechanisms, will greatly strengthen the sustainability aspects of the project as will the institutional framing of the EnMS and ESO courses with the South African professional and national qualifications structure. The EnMP regulation will also ensure EnMS development within selected industrial sectors/companies. In term of broader Government IEE policy and regulation formulation, it can be safely assumed that they will actively promote EnMS and ESO – but as part of a package of options.

A.2. Stakeholders. Identify key stakeholders (including civil society organizations, indigenous people, gender groups, and others as relevant) and describe how they will be engaged in project preparation:

The key stakeholders in the project are the Department of Energy (DoE) and the ‘South African National Energy Development Institute (SANEDI)’; the Department of Trade and Industry (dti) and the ‘South African National Cleaner Production Centre (SA-NCPC)’. In terms of these two departments/ministries, DoE is responsible for national energy policy, ensuring national energy (and electricity) security and supply, with the drive to increase national energy efficiency being a recently added mechanism by which to contribute to energy security and supply, through the National Energy Efficiency Strategy (NEES) process. The dti is responsible for the industrial sector under the objective of promoting structural transformation towards a dynamic and globally competitive economy that promotes industrial development, increased investment and employment creation. Additional Government stakeholders include the Department of Environmental Affairs (DEA) and the Department of Mineral Resources (DMR).

The SANEDI and the SA-NCPC will be central stakeholders throughout all aspects of project implementation through its duration, but they will each have particular focus components. While the division of responsibility will be decided upon under the PPG Phase, it is presently envisaged that DoE and SANEI would be the lead institutions for Components 1.0 and 2.0 (although the NCPC would have a significant role in the delivery of Energy Management Planning Support to industrial enterprises due to the experience and reputation it has built up within the industrial sector due to the SA Gov/DFID/SECO IEE Project). Components 3.0, 4.0 and 5.0 would be focused on the NCPC, under the dti’s support – particularly so where access to Government financial incentive schemes is concerned (and the DoE where the 12L Tax Incentive scheme is concerned). For Component 6.0, all government and non-government stakeholders would be involved.

The non-government stakeholders will be business and industry associations such as the National Business Initiative (NBi) and Business Unity South Africa (BUSA). Selected relevant CSOs will also be sought out to join the project’s PSC as well as specific project activities, particularly where promotion of Corporate Social Responsibility (CSR) functions are relevant. Lastly, Eskom will be invited and encouraged to be part of the project’s PSC, particularly as the project’s EnMS and ESO piloting component will seek to partner with Eskom’s Integrated Demand Management Programme under the piloting programme in Component 4.0. In terms of ensuring inclusion women and ethnic groups, the GEF project will work within the ‘*Broad Based Black Empowerment*’ and gender equality policies of the South Africa Government.

A.3. Risk: Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable):

Overall Project Objective	Overall Risk	Mitigation Measures	Level of Risk
To accelerate and expand the introduction of EnMS, ISO50001 and ESO within the South African Industrial (and selected commercial) context	Penetration rate of the project interventions alone does not facilitate the realization of the industrial energy intensity reduction targets set by the Government.	The role that externalities may play should be taken into account. However SA Government and industry have realized the importance of energy efficiency in mitigating the excess of energy demand and GHG emissions and are engaged in regard to implementing increased energy efficiency. The EnMS and ESO methodologies have significant potential to improve industrial energy efficiency to the degree outlined in the 3 rd Revision of the NEES.	Low
Risk Area	Risks	Mitigation Measures	Level of Risk
<i>Institutional Risks</i>	Coordination between the Dti and the DoE remains weak – with result of mixed messages to industry thereby resulting in enterprises not actively participating in the project.	This risk will be substantially mitigated by: 1. Clear definition of roles and responsibilities of the dti and the DoE (and the NCPC and SANEDI respectively) during project preparation and establishment of a Project Management Unit (PMU) to coordinate executing partners and major stakeholders during implementation. 2. Establishing a Project Steering Committee that sets out the institutional linkages among all stakeholders under a project governance structure.	Moderate
<i>Policy and Regulatory</i>	Ministries do not show interest in facilitating a conducive environment for increased industrial energy efficiency.	Government is widely committed and while difficulties due to inter and intra-departmental coordination are possible in regard to regulating the energy use of the South African industrial sector, demonstration of the benefits of EnMS and ESO measures in terms of increased national industrial competitiveness, increased job creation/retention, reduce national grid loading and reduced sector and national GHG emissions will continuously be packaged and promoted to the relevant parts of Government.	Low
<i>Industry and Market</i>	No interest is solicited within industry around EnMS and ESO concepts and their implementation. Companies and energy efficiency service providers fail to understand the technical/business opportunities and potential benefits of implementing energy management systems and energy efficiency projects.	Industry has already shown growing interest in collaborating with the existing SA Gov./DFID/SECO IEE Project on the implementation of EnMS/ESO. In order to build on this initial interest the GEF project will work extensively with institutions like the Energy Efficiency Leadership Network under the NBI to continue to lobby industry and the commercial sector on the business, social and environmental case for adopting EnMS and implementing ESO.	Low
<i>EnMS and ESO Piloting Programme</i>	EnMS and ESO Pilot projects are realized too late to demonstrate the benefits of EnMS and ESO during the useful lifetime of the Project	Due the fact the GEF Project will not be starting from zero base, due the SA Gov/DFID/SECO IEE Project, the industrial sector will be aware enough where target companies for the piloting programme will have already been identified prior to the outset of the project implementation. Potential pilot enterprises will be identified and secured by working through institutions such as the NBI and BUSA.	Low
<i>Economic and Financial</i>	Following, engineering-level personnel EnMS and ESO exposure, training, EnMS implementation and energy systems optimization assessments and reports, the management of enterprises might not be willing to invest in energy efficiency projects and technologies.	1. Providing training/exposure for enterprises' key higher management level personnel to build their capacity to better understand the economic and financial value of investing in energy management and energy systems optimization. 2. Provision of project preparation technical assistance and enhanced promotion and marketing of existing financing facilities through training for both banks and target clients.	Low

A.4. Coordination. Outline the coordination with other relevant GEF financed and other initiatives:

Beyond the SA Gov/DFID/SECO IEE Project, there are not so many past, on-going or foreseen technical assistance projects in South Africa within the field of industrial energy efficiency. In regard to the SA Gov/DFID/SECO Funded IEE Project, the proposed GEF Project is intimately linked as the latter will seek to take the EnMS and ESO methodologies that have been introduced by the former and mainstream them throughout the entire South African industrial sector, with a special focus on the energy intensive sub-sectors. During the PPG Stage the project will fully analyze the impact of the SA Gov/DFID/SECO IEE Project and refine the components and proposed activities of the full-sized GEF Project in order to ensure the greatest degree of scaling-up, expansion and mainstreaming of the EnMS and ESO methodologies. The same core project personnel implementing the SA Gov/DFID/SECO IEE Project will form the PMU and broader implementation team under the proposed GEF Project, albeit in an expanded form, as this will facilitate a smooth transition and expansion the within the shortest timeframe.

In terms of the ‘*South African German Energy Programme (SAGEN)*’ and the ‘*Swiss Agency for Development and Cooperation Climate Change Mitigation Programme in South Africa*’, which both contain energy efficiency components (albeit quite heavily focused on buildings), the proposed GEF Project would seek to partner with these projects in regards to aspects of their respective activities that can be translated into the industrial and commercial sectors. For example, any data collection and monitoring tools could be adapted and expanded to focus on industrial power consumption (SME and larger enterprise), with this providing the DoE with a potential tool/system to track industrial electricity consumption an energy efficiency improvement progress.

In regard to the GEF/UNDP ‘*Market Transformation through Energy Efficiency Standards and Labeling of Appliances Project*’, the proposed GEF/UNIDO project would seek to realize mutual impact enhancement. There will be potential for cooperation in areas such as the Standards and Labeling project’s awareness component which will target appliance manufactures, where the proposed GEF/UNIDO project would seek to integrate its message of reduced energy and production costs to appliance manufacturing enterprises. Another area of potential cooperation and synergy is the Standards and Labeling project’s Monitoring and Evaluation capacity building programme within the DoE, where the proposed GEF/UNIDO project would seek to integrate its sectoral industrial energy consumption and intensity mapping component as well as aspects of the Energy Management Planning component into the monitoring and evaluation capacity building activities of the Standards and Labeling project. This would facilitate greater internal DoE assessment of these industrial energy efficiency initiatives and strengthen their long-term functional sustainability within the DoE.

The proposed GEF Project would also seek to exchange relevant aspects of energy efficiency improvement techniques, and their application, with any future possible GEF funded ‘*Cleantech Accelerator Programme (CT)*’ in South Africa (following up the 2011 GEF funded ‘*South African Cleantech Competition*’). Specially, one of the main focus areas of the CT is to enhance the entrepreneurial skill base in the SME sector in regard to low-carbon technologies through professional mentoring. The engineering and energy profession experts that will be deployed and fostered under the proposed GEF Project will be in a good position to fulfill this mentoring and advisory role, thereby increasing the national exchange and flow of energy and low-carbon knowhow.

Lastly, the proposed GEF Project would look for synergies and collaboration with the national financial institutions that have ongoing financing facilities or mechanisms intended to support energy efficiency investments in industry, under the EnMS and ESO methodologies. During the PPG phase, the GEF Project will explore feasibility and modalities of collaboration with national banks to enhance their lending perspective to enterprises wishing to undertake energy efficiency improvements under the EnMS and ESO

B DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSAs, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

The project is fully consistent with the national priorities expressed in key South Africa’s strategies, policies and legislation on energy, climate change mitigation, industrial competitiveness and economic development. The South African government has prioritized the implementation of industrial energy efficiency and greenhouse gas emission mitigation through various policies, laws and strategies, these include:

The South African ‘*National Energy Act*’ No. 34 of 2008’, signed by the President of the Republic of South Africa on 17 November 2008, is the legal instrument by which the supply and consumption of energy is governed in South Africa. The Act aims to ensure that diverse energy resources are available, in sustainable quantities and

affordable prices, to the South African economy in support of economic growth and poverty alleviation, taking into account environmental management requirements. The Act provides the Department of Energy with the legal mandate and obligation, amongst other conditions, to: (1) collect, collate and analyze energy data and information; (2) develop a gazetted 'Integrated Energy Plan', with this plan being reviewed on an annual basis, where the plan takes into account factors such as security of supply, universal access to energy, international commitments, the environment and the contribution of energy supply to economic development.

The Act also has the objective of facilitating the effective management of energy demand and its conservation – industrial energy efficiency where industry is concerned. While the Act grants considerable powers to the Department of Energy (and hence the Government) to develop energy efficiency regulations and enforce them, the Act itself does not contain the necessary follow-up polices, secondary legislation or regulations to force/promote/incentivize changes in behaviour within industry or the wider economy. Many of these follow-up measures have yet to be developed.

The first '*National Energy Efficiency Strategy (NEES)*', which was published in March 2005, and first reviewed in October 2008. The 2012 revision (3rd Revision) which has been developed under the SA Gov/DFID/SECO IEE Project, takes a holistic and long-term view of the contribution that all sectors can make in the next 20 years under a series of Sector Action Plan Programmes, which include industry and manufacturing. Under the 3rd Revision, the goal of a 15% energy intensity reduction by the end of 2015 has been set for the industrial and commercial sectors respectively.

The South African Government's '*National Climate Change Response Strategy (NCCRS)*' was published by the South African Government in October 2011 after its approval by Cabinet. The National Climate Change Response Strategy policy paper provides a clear roadmap of how the nation must respond to the global challenge of climate change. The NCCRS will be used as the benchmark against which the efficacy of South Africa's climate change mitigation actions will be measured, as defined by the initial National Greenhouse Gas (GHG) Emissions Trajectory Range, commonly known as South Africa's Peak, Plateau and Decline (PPD) GHG emission trajectory.

While not strictly a policy or regulatory instrument, under '*South Africa's Copenhagen Accord Pledge*' the Government stated that "South Africa reiterates that it will take nationally appropriate mitigation action to enable a 34% deviation below the 'business as usual' emissions growth trajectory by 2020, and a 42% deviation below the 'business as usual' trajectory by 2025." This Government also stated that "the extent to which this action will be implemented depends on the provision of financial resources, the transfer of technology, and capacity building support by developed countries".

The '*Energy Efficiency Accord*' was a voluntary commitment by large businesses in South Africa to implement the National Energy Efficiency Strategy, first initiated in 2005. More recently, the Minister of Energy negotiated a revised and updated Accord based on the lessons learnt, with this revised Accord being signed in December 2011 during COP17 in Durban. The Accord was also renamed to become the '*Energy Efficiency Leadership Network (EELN)*'. Currently there are over 70 signatories to the EELN comprising of a number of South Africa's largest companies, the DoE and eight key business associations who help mobilize their members towards increasing their energy efficiency. The company signatories range from enterprises in the mining, industrial, and petrochemicals sectors to the commercial and financial sectors; mostly the top energy users in the country including Eskom, Sasol, BHP Billiton, Anglo American, AngloGold Ashanti, Anglo Platinum, Xstrata, ArcelorMittal and Exxaro.

Under South Africa's 2007 '*Technology Needs Assessment (TNA)*', like other developing countries South Africa acknowledges that it faces the dual challenge of protecting the environment while at the same time pursuing economic growth in a sustainable manner, while recognizing that climate change has the potential to undermine progress in economic development and poverty alleviation. The TNA therefore identifies aspects of industry and mining as key areas for attention where significant reductions in national GHG emissions can be achieved through putting in place such initiatives as improved data management and incentives for energy efficiency. South Africa's '*2nd National Communication*' under the *United Nations Framework Convention on Climate Change (UNFCCC)* also highlights the role of industrial energy efficiency as one of the four major areas with the largest GHG emissions mitigation potential within the South African context.

B.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities:

The project falls under and supports the GEF-5 Climate Change Mitigation (CCM) focal area. By addressing key existing information, capacity and policy barriers for sustainable industrial energy efficiency in South Africa, the project directly contributes to, and is fully aligned with, the *CCM Strategic Objective 2 - Promote market*

transformation for energy efficiency in industry and the building sector. The project would make a significant contribution to the wide-scale stimulation and strengthening of the South African market for industrial energy efficiency (IEE) products and services, under the Energy Management Systems and Energy Systems Optimization methodologies. The project is consistent with UNIDO's acknowledged comparative advantage for promoting energy efficiency within the industrial sector.

B.3 The GEF Agency's comparative advantage for implementing this project:

UNIDO is included in the Comparative Advantage Matrix for promoting energy efficiency in the industrial sector. Furthermore, GEF Council Document on Comparative Advantages of the GEF Agencies has recognized UNIDO's extensive knowledge of SMEs in developing countries and countries with economies in transition. Furthermore, UNIDO is the pioneer agency responsible for the development and implementation of Energy Management, Energy Optimization and ISO50001 technical assistance projects worldwide as well as being a central stakeholder in the development process of the ISO50001 Energy Management Standard itself.



UNIDO will draw upon its previous and current experience of cooperation with South African manufacturing enterprises and stakeholders as well as of implementation of environmental and resource efficient projects that contribute to enhance South African industrial competitiveness while delivering key global and local environmental benefits. UNIDO will bring to the project its leading experience and extensive knowledge assets (i.e. training programmes, tools, methodologies, platforms, etc.) for capacity building on energy management systems (EnMS) and standards implementation, industrial energy system auditing and optimization, certification schemes for EnMS, energy managers and ISO 50001 auditors, monitoring and verification, etc.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (mm/dd/yyyy)
Mr. Zaheer Fakir, GEF Operational Focal Point	Chief Director, International Governance and Relations	Department of Environmental Affairs, Government of the Republic of South Africa	07 September 2012

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	DATE (mm/dd/yyyy)	Project Contact Person	Tele- phone	Email Address
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