



Global Environment Facility

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December 07, 2009

Dear Council Member:

I am writing to notify you that we have today posted on the GEF's website at www.TheGEF.org, a medium-sized project proposal from UNEP entitled ***South Africa: Reducing the Carbon Footprint of Major Sporting Events, FIFA 2010 and the Implementation of the National Greening Programme in Liaison with 2010 FIFA LOC***, to be funded under the GEF Trust Fund (GEFTF).

The objective of this project is to demonstrate the use of efficient energy as a key component of the South African National Greening Programme of the FIFA 2010 World Cup. The project aims to popularize these approaches with decision-makers, the general public and international tourists who will be participating at the 2010 FIFA World Cup event in South Africa. This will promote the public awareness on reducing their carbon footprint, during major sporting events.

The project proposal is being posted for your review. We would welcome any comments you may wish to provide by December 21, 2009, in accordance with the new procedures approved by the Council. You may send your comments to gcoordination@TheGEF.org.

If you do not have access to the Web, you may request the local field office of the World Bank or UNDP to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

Attachment: Project Document

Copy to: Country Operational Focal Point
GEF Agencies, STAP, Trustee



REQUEST FOR CEO ENDORSEMENT/APPROVAL

PROJECT TYPE: Medium-sized Project

THE GEF TRUST FUND

Submission Date: 3 December 2009

PART I: PROJECT INFORMATION

GEFSEC PROJECT ID:

GEF AGENCY PROJECT ID: 3948

COUNTRY(IES): South Africa

PROJECT TITLE: Reducing the Carbon Footprint of Major Sporting Events, FIFA 2010 and the implementation of the national greening programme in liaison with 2010 FIFA LOC

GEF AGENCY(IES): (select), (select), (select)

OTHER EXECUTING PARTNER(S): Department of Environmental Affairs

GEF FOCAL AREA(s): Climate Change

GEF-4 STRATEGIC PROGRAM(s): CC-SP1 (see preparation guidelines section on exactly what to write)

NAME OF PARENT PROGRAM/UMBRELLA PROJECT: N/A

Expected Calendar (mm/dd/yy)	
Milestones	Dates
Work Program (for FSPs only)	N/A
Agency Approval date	12/01/2009
Implementation Start	12/15/2009
Mid-term Evaluation (if planned)	
Project Closing Date	03/31/2011

A. PROJECT FRAMEWORK (Expand table as necessary)

Project Objective: The objective of this project is to demonstrate the importance of the role of efficient energy as a sustainable intervention to reduce carbon emissions at major sporting events, through the use of efficient energy as a key component of the South African National Greening Programme of the FIFA 2010 World Cup. The project aims to popularise these approaches with decision-makers, the general public and international tourists who will be participating at the 2010 FIFA World Cup event in South Africa. This will promote the public's awareness on reducing their carbon footprint, during major sporting events, through the demonstration of efficient energy technologies.

The goal of this project is to showcase best practice carbon reduction energy efficient projects through the retrofit of street lighting to energy efficient street lighting, thus promoting renewable energy through showcasing its application by demonstration projects using solar energy and drive awareness on climate change and carbon offsetting through messaging in the tourism sector.

Project Components	Indicate whether Investment, TA, or STA ²	Expected Outcomes	Expected Outputs	GEF Financing ¹		Co-Financing ¹		Total (\$) c=a+ b
				(\$ a)	%	(\$ b)	%	
1. Reduce Energy Consumption	TA	a)Energy consumption for advertising and other sports related energy consumption around 6 stadiums down by 15% of baseline estimates. (b) Use of renewable energy as an	Demonstration of green technologies including solar and energy efficient technology by the end of the World Cup.	500,000	1295	3,359,998	87.05.85	3,859,998

		alternative source of electricity promoted.						
2. Promote Low Carbon Participation	TA	a) 30% of spectators in 6 host cities adopt the green passport objectives as part of their participation for visitors	a) Green tourism initiative (building on an existing Green Passport initiative adopted for promotion by six (6) host cities by the end of the World Cup.	250,000	4.6	5,183,398	95,40	5,433,398
3. Assessment of greening large sporting events for future sporting events	TA	a) To ensure integration and awareness of the Green Goal practices of FIFA 2010; evaluation and dissemination of lessons learned; addressing greening of hardware and software. b) Measure carbon benefits to claim credits.	a) Using sports events to change practices and behaviour demonstrated and a set of practices and guidelines for future sporting events developed. b) Carbon benefits credits claimed	150,000	68,18	70,015	31,82	220,015
4. Project Management				100,000	100	0	0	100,000
Total Project Costs				1,000,000	11,32	8,613,411	88,68	9,713,411

¹ List the \$ by project components. The percentage is the share of GEF and Co-financing respectively of the total amount for the component.

² TA = Technical Assistance; STA = Scientific & Technical Analysis.

B. SOURCES OF CONFIRMED CO-FINANCING FOR THE PROJECT (expand the table line items as necessary)

<i>Name of Co-financier (source)</i>	<i>Classification</i>	<i>Type</i>	<i>Project</i>	<i>%*</i>
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DEA (MTEF)	Nat'l Gov't	In-kind	8,613,411	100%
Total Co-financing			8,613,411	100%

* Percentage of each co-financier's contribution at CEO endorsement to total co-financing.

C. FINANCING PLAN SUMMARY FOR THE PROJECT (\$)

	<i>Project Preparation a</i>	<i>Project B</i>	<i>Total c = a + b</i>	<i>Agency Fee</i>	<i>For comparison: GEF and Co-financing at PIF</i>
GEF financing	-0	1,000,000	1,000,000	100,000	1,100,000
Co-financing	-0	8,613,411	8613,411		8,613,411
Total	0	9,613,411	9,613,411	100,000	9,713,411

D. GEF RESOURCES REQUESTED BY AGENCY (IES), FOCAL AREA(S) AND COUNTRY(IES)¹

<i>GEF Agency</i>	<i>Focal Area</i>	<i>Country Name/ Global</i>	<i>(in \$)</i>		
			<i>Project (a)</i>	<i>Agency Fee (b)²</i>	<i>Total c=a+b</i>
UNEP	CLIMATE CHANGE	SOUTH AFRICA	1,000,000	100,000	1,100,000
Total GEF Resources			1,000,000	100,000	1,100,000

¹ No need to provide information for this table if it is a single focal area, single country and single GEF Agency project.

² Relates to the project and any previous project preparation funding that have been provided and for which no Agency fee has been requested from Trustee.

E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

<i>Component</i>	<i>Estimated person weeks</i>	<i>GEF amount (\$)</i>	<i>Co-financing (\$)</i>	<i>Project total (\$)</i>
<i>Local consultants*</i>	70	105,000	-0	105,000
<i>International consultants*</i>	10	30,000	-0	30,000
Total	80	135,000	0	135,000

* Details to be provided in Annex C.

F. PROJECT MANAGEMENT BUDGET/COST

<i>Cost Items</i>	<i>Total Estimated person weeks/months</i>	<i>GEF amount (\$)</i>	<i>Co-financing (\$)</i>	<i>Project total (\$)</i>
<i>Local consultants*</i>	70	105,000	0	105,000
<i>International consultants*</i>	10	30,000	0	30,000
<i>Office facilities, equipment, vehicles and communications*</i>		0	0	
<i>Travel*</i>			0	
Total	80	135,000	0	135,000

* Details to be provided in Annex C.

G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? Yes ☐ no ☐

(If non-grant instruments are used, provide in Annex E an indicative calendar of expected reflows to your agency and to the GEF Trust Fund).

H. DESCRIBE THE BUDGETED M & E PLAN:

Project monitoring and evaluation(M&E) will be conducted in accordance with established UNEP and GEF reporting requirements. Quarterly reports will be submitted to UNEP by the executing agency, providing a brief summary of the status of activities and output delivery, explaining variances from the workplan, and presenting work plans for each successive quarter for review and endorsement. The quarterly reports will also provide a basis for fund disbursements. The Project Management Unit(PMU) will prepare a detailed monitoring and evaluation plan to be presented at the Inception Workshop. The M& E Workplan and budget (Annex) provides performance and impact indicators with their corresponding means of verification. This will form the basis upon which the project M & E will be built and initialized during the Inception Workshop. The table below provides a tentative allocation of the budget over the main items:

Type of Independent Assessment Activity	Responsible Party	Budget US\$ <i>Excluding project team staff time</i>	Time Frame
Inception Workshop	PMU UNEP-GEF	5,000	Within first two months of project start up
Inception Report	PMU	0	Immediately following IW
APR/PIR	PMU UNEP-GEF	0	Annual
Steering Committee Meetings	Project Manager UNEP-GEF	3,000	Following Project IW and subsequently at least quarterly
Quarterly Progress Reports	PMU	0	To be determined by PMU
Review of environmental commitments in SA FIFA bid and LOC Green Goal implementation.	PMU External Consultants,	30,000	March 2010
Assessment of the six Host City Green Goal Plans	PMU External Consultants, i.e. evaluation team	040,000	April 2010
Lessons Learned	PMU UNEP-GEF	025,000	August 2010
Development of a set of guidelines and practices during major sporting events(FIFA 2010)	PMU UNEP-GEF	025,000	Oct-Nov 2010
Dissemination of best practice report	PMU UNEP-GEF	22,000	January 2011

PART II: PROJECT JUSTIFICATION: In addition to the following questions, please ensure that the project design incorporates key GEF operational principles, including sustainability of global environmental benefits, institutional continuity and replicability, keeping in mind that these principles will be monitored rigorously in the annual Project Implementation Review and other Review stages.

A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED GLOBAL ENVIRONMENTAL BENEFITS TO BE DELIVERED: South Africa's hosting of the FIFA 2010 World Cup will be one of the most important global events to take place on the African Continent. Studies indicate that the FIFA 2010 World Cup will have the largest carbon footprint of any major events with a goal to be climate neutral. The estimated domestic carbon footprint of 201 FIFA world Cup is estimated to be 896,611 tonnes of carbon dioxide and an additional an 1, 896, 589 tCO₂e contributed by international travel to the event. Second, is the energy use in accommodation estimated to be 340,128 tCO₂e or 12 % with the third emission drawn from stadia and stadia precinct use of energy at 16,637 tCO₂e. South Africa's major entry in the field of carbon neutral events took place during the 2002 World Summit on Sustainable Development(WSSD) . Since then, the world has seen the emergence of carbon neutral branding of major events gaining popularity with the Commonwealth Games 2002, 2006 Winter Olympics, FIFA 2006 World Cup, 2008 Beijing Olympics , and now the 2010 FIFA World Cup will attempt to offset their emissions. The Green Goal 2010 programme seeks to ensure that FIFA World Cup has a long term sustainable impact on the country and the region. The programme has made provisions for achieving carbon

neutrality by reducing the carbon footprint generated as a result of the World Cup through mitigative interventions, and secondly, offsetting the remaining emission by encouraging and promoting projects that invest in reducing Greenhouse gas emissions.

This project will go a long way toward contributing to host city (ies) efforts in meeting the 5% 'minimum environmental standards' target set in the Green Goal 2010 which proposes that host cities offset their carbon footprint through mitigative projects. In addition, the Green Goal 2010 recommends host cities purchase 'green electricity' from sources that are registered with the South African Tradable Renewable Energy Certification Programme, in order to cover the electricity demand of stadia and stadia precinct during the 2010 FIFA World Cup. However, the challenge for host cities is that they will have to source electricity from Eskom, the national electricity supplier which produces it from coal sources that are largely responsible for the emission of sulphate and nitrate oxide greenhouse gases. Even though this may be the case, Eskom together with its Southern African Power Pool Partners have agreed to donate green energy that is produced from 11 June 2010 to 11 July 2010 towards the 2010 FIFA World Cup.

The 2010 FIFA tournament features 64 matches distributed over 10 stadium, including energy consumption demands at the stadia. It should be noted that all electricity demands is currently supplied from the national grid and while all stadia have been fitted with diesel generators, the estimated that emissions be similar to the electricity grid and have no or little impact in reducing carbon emission. Given the seating capacity and the number of World Cup days event at the stadia, the overall carbon footprint including the International Broadcast Centre(IBC) is estimated to be 16,637tCO₂e or 16,696 MWh of total electricity consumed during the 64 days of the tournament.

The second source of carbon emission is energy consumption sources from accommodation and the hospitality industry. Studies indicate that 31KWh is consumed per person on an overnight stay at the hotel. It is estimated that an average visitor will stay an estimated 55 days during the 2010 World Cup and the carbon footprint over that period is estimated to be 340,128tCO₂e. The activation of the UNEP's Green Passport will serve to inform visitors on ways in which they could reduce their own carbon footprint during their stay at various hospitality facilities.

The GEF funding will be utilized to implement energy reduction projects in six host cities, namely, i) City of Tshwane Metropolitan Municipality(TMM), ii) City of Johannesburg Metropolitan Municipality(CoJ), iii) Nelson Mandela Metropolitan Municipality(NMMM), iv) City of Cape Town Metropolitan Municipality(CPT), v)Polokwane Local Municipality(PLM), and vi)Rustenburg Local Municipality(RLM). In particular, funding will assist the host cities to reduce their energy consumption by retrofitting public street lights, traffic lights and billboards in and around the stadia with solar panels. The long term benefits of this initiative to host cities and other municipalities in particular, is that it will help reduce the cost of maintenance and upkeep for public street lighting and traffic lights, which is a cost to the municipality for which it does not earn revenue on. In addition, citizens of these municipalities will enjoy a better standard of living as crime statistics decline as a result of better energy efficient lighting being made available in their towns and cities. The energy efficient traffic lights will reduce delays experienced in traffic due to power failures as these traffic lights will operate without backup power for up to five days, thus saving the public time and money wasted as a result of traffic delays. For many international climate neutral events, the offset projects are not implemented until after the end of the event. It is imperative to ensure that at least some of these projects are implemented and located in areas that are visible to local and international spectators, the carbon reduction projects will contribute to raising the public awareness. Such technology projects that are easy for the general public to see, will have a higher rate of replicability

B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL AND/OR REGIONAL PRIORITIES/PLANS:

South Africa is signatory to both the the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, and as such the country recognizes the grave risks posed by global warming and is committed to playing a part in taking the necessary actions to respond to the challenge of climate change. In particular, South Africa finds itself in a situation in which it is both a high emitter of greenhouse gases, as well as a country experiencing growth. South Africa has also accepted that climate change is a national priority with cross cutting implication for a wide range of government departments, and a government-wide working group on climate change has been established at an official level. The proposed project is consistent with the South African national policies, priorities as defined in the various policy instruments. The government has in place a legislation which support reduction of greenhouse gases and includes but not limited to, i) a National Climate Change Response strategy for

South Africa(2004), ii) National Climate Change Response Policy (2009) ,iii) Long Term Mitigation Scenarios Option for South Africa(2007)iv) The 2009 Climate Change Response Database, v) the Climate Change Research and Development Strategy, vi) the WSSD Leaving a Greening Legacy, Guidelines for event greening, vii) the National Greening 2010 Framework, viii) the Guidelines for Greening of Large Sport Events, with a focus on the FIFA 2010 World Cup, ix) the Renewable Energy Policy and the Energy Efficiency Strategy. South Africa is currently the chair of the African Ministerial Conference on Environment (AMCEN) and in that capacity has worked with the UNEP to begin a support programme that will build African capacity around Climate Change.

- C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH [GEF STRATEGIES](#) AND STRATEGIC PROGRAMS:** The project is designed to demonstrate South Africa's commitment to hosting a low carbon to carbon neutral sporting event by reducing energy consumption prior, during and post the 2010 FIFA World Cup. This will be achieved via the retrofitting of solar panels on a) public street lights, b) major traffic intersections near or around stadia, and on c) billboards near the airports and/or stadia in six host cities. Furthermore, the project will address the environmental impact caused by carbon emissions generated as a result of international travel and energy, water consumption, as well as waste generated by visitors and spectators at the stadia and accommodation facilities through the promotion of the responsible tourism by undertaking activities that are aligned to the 2010 FIFA Green Goal initiative, the DEA's Greening Framework, Sustainable development strategy, and UNEP's Green Passport. The project is fully in line with the GEF -4 Strategic Objective 1. which seeks to 'promote the energy efficient technologies and practices in the residential and commercial buildings'
- D. JUSTIFY THE TYPE OF FINANCING SUPPORT PROVIDED WITH THE GEF RESOURCES.** GEF funding for this project will contribute towards reaching South Africa's goal of hosting a carbon neutral World Cup, by funding projects in host cities that are aimed at reducing the energy consumption during the tournament. The GEF funding of US\$ 1,100,000 million will be leveraged by funding from the Department of Environmental Affairs (DEA) amounting to US\$ 8,613,411 total funding allocated to 2010 FIFA initiatives.
- E. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:** The project will form links with other projects coordinated by the DEA donor funded project; the retrofitting of solar heaters and public street lighting, in host cities, and training facilities(stadia). b) the Local Organizing committee, especially the 2010 FIFA Green Goal initiative, Renewable energy projects of the Department of Energy(DoE). All these energy reducing projects are complementary and are being implemented to reduce the country's greenhouse emission as well as contributing towards reducing the FIFA 2010 World Cup footprint.
- F. DISCUSS THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT DEMONSTRATED THROUGH [INCREMENTAL REASONING](#) :** The GEF funding will be utilized to contribute towards the reduction of 2010 FIFA World Cup carbon footprint, by funding projects that aim to reduce energy consumption, in the six host cities. At the beginning of construction of 2010 related infrastructure, none of the 9 host cities attempted to conduct energy consumption studies. This means that baseline data relating to consumption of energy for public street and traffic lighting, as well as that utilized in the hospitality industry is not in place to assess against the impact of retrofitting. which will provide useful data to demonstrate the effectiveness of switching or investing in energy efficient technologies like the solar panels. The local and global environmental benefit will include the sharing of best practice with other municipalities and countries who have a limited access to the conventional electricity grid, as the project result will demonstrate the cost effectiveness of renewable energies and energy efficiency as an alternative way of producing energy and diminishing energy demand from fossil fuels.
- G. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED AND OUTLINE RISK MANAGEMENT MEASURES:**

Technical Risks: these are considered to be low since all the technology components are available locally. and products used will be off-the- shelf products.

Market Risks: these risks are also relatively low since host cities have already included in the stadia design and related infrastructure, elements for reducing energy consumption. Of note may be the delays in receiving approval for the additional elements, for example, from the Mayoral Council of the host city. The global risk might relate to the scaling up of the technology from non-host cities who may be slow in using the technology in their municipalities.

Project Implementation Risks: It is anticipated that the PMU will be work with a number of service providers and consultants. Any form of delay on the part of the service provider or partners, or inadequate performance will have an effect on the deliverables of the project.

Sustainability Risks: In the short-term the sustainability of the project relates to the successful implementation of the project in terms of the action plan, goals and products delivered. Its sustainability will be guaranteed by the timely provision of resources, to bring the project to a successful completion.

Financial Sustainability Risks: Financial sustainability will be realized in the reduction of energy consumption and savings on maintenance of the assets by the host city/municipality. Replicability: the project activities that raise awareness of key decision-makers around the benefits of adopting mitigation project relating to energy efficiency to reduce the greenhouse gases and save cost by going green.

RISKS	LIKELIHOOD	REMEDIAL ACTIONS
1. Build-up to the 2010 World Cup has not prioritised the environmental components, from planning to actual implementation of strategies	Medium	The PMU in partnership with DEA will design a strategy that will assist the host cities in completing their environmental planning and assisting them with resource mobilisation for implementation
2. Some of the smaller host city municipalities as well as the Local Organising Committee (LOC) have limited capacity to implement the greening 2010 action plans.	Medium	DEA has developed a process that will assist the host city municipalities identify and build capacity to implement their 2010 greening action plans.
3. Host city municipalities may lack the technical capacity to implement and manage the renewable energy interventions.	Medium	The CEF, as part of the roll-out strategy of the renewable energy interventions, will build in a process of capacity development and sustainable maintenance plans at the targeted host cities for the renewable energy interventions
4. Private sector participation with the outreach and communications strategy for the efficient and renewable energy interventions may require additional efforts as the private sector has shown reluctance to participate.	Low	The outreach and communications strategy, being implemented by the PMU for this project has to be designed in such a manner that it highlights the upside for private sector participation. Needs to demonstrate that such participation has high value publicity and through public perceptions of being associated with sustainable actions to mitigate climate change through the implementation of efficient and renewable energy strategies.
5. The global economic down-turn may inadvertently discourage host city municipalities from building on critical capacity within their environmental services departments, as a cost saving measure.	Medium	It is recommended that the project design makes specific reference to scenarios that limit the impact of a down-turn in the economy on the project.

- H.** 1. The Build-up to the 2010 World Cup has not prioritised the environmental components, with regard to actual implementation of strategies. The PMU in partnership with DEA, will design a strategy that will assist the host cities with resource mobilisation for implementation. 2. Host city municipalities as well as the Local Organising Committee (LOC) lack adequate capacity to implement the greening 2010 action plans. DEA has developed a guideline for greening of sporting events and has work shopped host cities on the guideline. 3. Host city municipalities may lack the technical capacity to implement and manage the renewable energy interventions. The CEF, as part of the roll-out strategy of the renewable energy interventions, will build-in a process of capacity development and sustainable maintenance plans at the targeted host cities for the renewable energy interventions. 4. Private sector participation with the outreach and communications strategy for the efficient and renewable energy interventions maybe lacklustre. The outreach and communications strategy, being implemented by the PMU, for this

project has to be designed in such a manner that it highlights the up-side for private sector participation and linkages that such participation has high value publicity; and through public perceptions of being associated with sustainable actions to mitigate climate change through the implementation of efficient and renewable energy strategies. 5. The global economic down-turn may inadvertently encourage host city municipalities from building on critical capacity within their environmental services departments, as a cost saving measure. It is recommended that the project design makes specific reference to scenarios that limit the impact of a down-turn in the economy on the project, and that DEA actively engages with Host city municipalities to ensure that critical capacity within the environmental services sections are maintained and improved upon.

EXPLAIN HOW COST-EFFECTIVENESS IS REFLECTED IN THE PROJECT DESIGN: All three outcomes of the project will ensure cost effectiveness of the project. Outcome1; ensures cost effectiveness as GEF funded activities under this outcome will be focusing on the integration of greenhouse emissions mitigation initiatives are complementary to the host city infrastructure plans for the 2010 FIFA World Cup™. Outcome 2 will ensure cost effectiveness by linking and utilizing the national minimum standards for responsible tourism, to reduce the energy consumed by the hospitality industry, raise awareness on the impact of climate change large sporting events, and activate the UNPE's Green Passport to increase awareness in participating countries, fans and visitors. Outcome 3, GEF funding will be utilized to document lessons learned on monitoring and evaluating the implementation of the Green Goal and National Greening programmes and produce six host city greening legacy report.

I. PART III: INSTITUTIONAL COORDINATION AND SUPPORT

- A. INSTITUTIONAL ARRANGEMENT:** The project will be implemented over a fourteen month period . It will be implemented by UNEP and executed by the National Department of Environmental Affairs (DEA) which is the lead government department, and will be responsible for coordination of all concerned government departments and agencies as well as chair the project steering committee. The department will also appoint a the Central Energy Fund together with a dedicated Project Management Unit (Consultant) who will then be responsible for the execution of the project on its behalf.

The main activities undertaken during the Inception phase will be to specify in more detail the content and activities for each of the project components, preparation of project schedules and initial work plans, and specify detailed plans for independent assessment as well as stakeholder participation.

A Project Steering Committee (PSC) will be established for the purpose of providing guidance and supervision in the implementation of the project activities and will be composed as follows; Department of Environmental Affairs, Representatives from the 6 host cities, a representative from the Local Organizing Committee, a representative from the department of Minerals and Energy, representative from UNEP and GEF.

A project Management Unit (PMU) headed by a project manager will be responsible for the formulation of and submission of work and financial plans, monitoring of work progress, coordination with the various stakeholders, and other project cooperative partners, ensuring the timely provision of inputs to the PSC, coordinating issues with UNEP and GEF, providing administrative support and reviewing reports in line with UNEP procedures.

- B. PROJECT IMPLEMENTATION ARRANGEMENT:** The executing agency for this project is the Department of Environmental Affairs (DEA). The proposed executing mechanism for the project will entail the establishment of a project management unit (PMU) which will have oversight of the day to day management of the project and will be staffed by a Project Manager and administrator. The project will be closely monitored in accordance to the M & E guidelines and procedure from GEF/UNEP. Based on the logframe matrix, and already identified project output, clear and quantifiable performance indicators will be further refined during the inception workshop and will be implemented along defined parameters. A final report will be prepared at the end of the project, for submission to the GEF and UNEP for evaluation by external viewers. The report will include technical and non technical results as well as consolidated lessons learned. A final independent evaluation will be carried out. Procurement of

goods and services, and contracting of service providers and consultants will be in line with the South African government procurement legislation, guidelines and procedures.

PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF:


Part A: Project Component 2: This component has been revised, since it emerged that the GreenStay SA environmental system is not nationally accredited, and is a private sector led initiative which only operates in the Western Cape. The GreenStaySA will be replaced by the new National Minimum Standards in Responsible Tourism (NMSRT), which is a comprehensive sustainable tourism accreditation programme facilitated by the National Department of Environment (DEA) the Department of Tourism, and the Tourism Grading Council of South Africa (TGCSA). These changes will bring about improvement at the level of impact of this element substantially as it will be linked to a national initiative with a much more inclusive, uniform and comprehensive standards set for minimizing the carbon footprint in the hospitality sector.

Part A: Project Component 3 : This item has also been reviewed. It is proposed that the expected output b) 'measure carbon benefits to claim credit' and the related expected output b) 'carbon benefits credits claimed' be discarded completely from the project as the process for registering carbon credits and the identification of carbon offset projects will require more effort and time than the current scope and timeframe of this initiative does have.

Part B Sources of Confirmed co-financing The implementation of the 2010 FIFA World Cup™ began in 2006/07 financial year. The South African government has through the National Treasury to set aside special funding for the greening of the tournament which will be facilitated by DEA. Given the need by government to bring forward a number of projects for implementation so as to meet the 2010 timeframes, DEA has had to utilize the various sources of funding to undertake 2010 project prioritized by national government. The amount budgeted for the 2010 greening projects is totals \$8,613,411 expanded to date. The projects implemented are at different stages of completion. The national greening projects included but not to the following, i) a Feasibility Study for a Carbon Neutral 2010 FIFA World Cup in South, ii) Development of a National Greening Framework, iii) Development of Greening Business Plans for 3 host cities, iv) Green Review of Stadiums, v) capacity building to all host cities implemented on on guidelines for greening large sporting events, vi) development of implementation plan outlining 2010 Legacy Projects for host cities, vii) Request for Proposal(RFP) for the development of a web based system for voluntary offsetting of carbon emissions resulting from air travel during the 2010 FIFA World Cup, and the development of a broader National Greening Legacy Framework and Strategy, viii) the development of an monitoring and evaluation tool, ix) development of a training manual for 2010 volunteers, x) the rollout of energy efficient public street lighting three metropolitan municipalities,xi) development of energy auditing training manual, and xii) a prefeasibility study on non- motorized transportation in all host cities.

PART V: AGENCY (IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for CEO Endorsement.

Agency Coordinator, Agency name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Maryam Niamir-Fuller, Director, UNEP-GEF		12/03/2009	Jyoti Mathur-Filipp, UNEP-GEF	+254-20-762-3765	jyoti.mathur-filipp@unep.org

ANNEX A: PROJECT RESULTS FRAMEWORK

GOAL	The goal of this project is to showcase best practice carbon reduction by demonstration projects using solar energy and drive awareness on climate change and carbon offsetting through messaging in the tourism sector.				
PROJECT OBJECTIVE	The objective of this project is to demonstrate the importance of the role of low carbon technologies at major sporting events. The project aims to popularise these approaches with decision-makers, the general public and international tourists who will be participating at the 2010 FIFA World Cup event in South Africa. This will promote public awareness on reducing their carbon footprint, during major sporting events, through the demonstration of low carbon technologies.				
	INDICATOR	BASELINE	TARGET	SOURCES OF VERIFICATION	RISKS AND ASSUMPTIONS
Outcome 1:					
Demonstration of green technologies including solar technology by the end of the World Cup.	Number of public street lighting, traffic lighting and billboards retrofitted in six host cities	Documented energy consumption and savings reports (baseline) as a result of solar panel fitted on street, traffic lights and billboards, are not in place for the six host cities. Demonstration projects by the Central Energy Fund(CEF) on retrofitting solar powered street lighting, traffic lights and billboards have only been implemented in Cape Town and Gauteng Province	-100 solar powered public street lighting installed in 6 host cities, - 60 solar powered traffic lights installed in 6 host cities -12 retrofitted with solar powered technologies in 6 host cities	-Reports of energy saving (audit) -engineers(service provider's) progress reports -engineers hand over report	-Host cities adopts energy efficient measures -Host cities cooperative in providing energy consumption data
Outcome 2:					

30% of spectators in 6 host cities adopt the Green Passport objectives as part of their participation for visitors	Number of copies 2010 Green Passports produced and distributed at hotels, airports and other venues	None of the six host cities has included the development of a green passport in their greening plans.	100 000 , 2010 Green Passport produced and activated on UNEP's Green Passport website, SA tourism, Dept of tourism, DEA, the six host cities and hospitality industry partners	Data collected from main, FEDHASA, the six provincial based tourism information and visitor centres in host cities, airports (Cape Town, Durban & Johannesburg) and hotels check-in points	Hospitality associations, Department of Tourism and DEA, provincial tourism agencies and host city visitor centres willingness to distribute and post the green passport on their respective websites.
	Number of hospitality participating in greening their establishments in the six host cities.	Limited programmes preparing the hospitality industry in reducing its contribution to the carbon footprint generated in the hospitality sector during major sporting events.	60 hospitality establishments implementing measures to reduce their carbon foot print during the 2010 tournament.	Data will be collected from the Tourism Grading Council of South Africa on the number of establishments meeting the National Minimum Standards for responsible Tourism (NMSRT) for accreditation as environmentally responsible tourism establishments during the FIFA World Cup™.	Hospitality establishments, TGCSA, DEA and Department of Tourism willing to participate in the programme.
Outcome 3.					
Evaluation and dissemination of lessons learned, addressing greening of hardware and software	Comprehensive independent assessments on greening projects implemented by the six host cities are not in place to draw lessons of best practice.	Plans and budgets not all in place for undertaking an comprehensive independent assessment of the environmental commitments at six host city	Devise a set of comparable and key environmental measures which should form part of planning every major sporting event in order to ensure sustainable outcomes.	Review report on the SA FIFA bid proposal and the achieved environmental commitment and LOC Green Goal -Review report of the achievements of the six host city green goal plans -a set of guidelines and practices developed -a lessons learned report	LOC, host city and relevant departments willing to share information.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work programme inclusion and the Convention Secretariat and STAP at PIF)

GEF SECRETARIAT REVIEW FOR FULL/MEDIUM-SIZED PROJECTSⁱ¹

Country/Region: South Africa
 Project Title: South Africa: Mainstreaming the Environment in Major Sports Events: 2010 World Cup Energy Efficient and Renewable Energy and Carbon Mitigation Outreach
 Programme: GEFSEC Project
 ID:

3948

GEF Agency Project ID: GEF Agency: UNEP GEF Focal
 Area (s): Climate Change
 GEF-4 Strategic Program (s): CC-1;
 Anticipated Project Financing (\$): PPG:\$0 GEF Project Allocation:\$1,000 Co-financing:\$1,924 Total Project Cost:\$2,924
 PIF Approval Date: Anticipated Work Program Inclusion: June 01, 2009
 Program Manager: Alexis Jean-Roch Mariani GEF Agency Contact Person: Jyoti Mathur-Filipp

Review Criteria	Questions	Secretariat Comment at PIF/Work Program	Secretariat Comment At CEO Endorsement(FSP)/Approval	Response to comments
Eligibility	1. Is the participating country eligible?	Yes.		
	2. If there is a non-grant instrument in the project, check if project document includes a calendar of			
	3. Has the operational focal point Endorsed the project?	Yes, by letter on 03-20-2009, but the Operational focal point has not precise the amount endorsed for		
	4. Which GEF Strategic Objective/ Program does the project fit into?	CC-1 - energy efficiency CC - 3 - renewable energy		
	5. Does the Agency have a comparative advantage for the project?	Yes. UNEP has a comparative advantage for The TA projects in renewable energy and energy efficiency. Moreover, UNEP has already worked with a number of sporting events to mainstream environment in the events. UNEP is working		

Resource Availability	6. Is the proposed GEF Grant (including the Agency fee) within the resources available			
	• The RAF allocation?	Yes		
	• The focal areas?	Yes. \$7,942,938 remain to be programmed		
	• Strategic objectives?	NA		
	• Strategic program?	NA		
Project Design	7. Will the project deliver tangible global environmental benefits?	This project is likely to save energy. In addition, the awareness raising components may deliver indirect local environmental		
	8. Is the global environmental benefit Measurable?		The global environmental benefits of this Project is difficult to measure. They will be mainly linked to the demonstration of solar powered	
	9. Is the project design sound, its Framework consistent & sufficiently clear (in particular for the outputs)?	The objective of the project is to mainstream Environment in the 2010 World Cup. It has 5 components : 1. to reduce energy consumption through the demonstration of solar appliances and equipments in 3 host cities : street lighting, traffic lights, billboards at airports and stadia, EE light bulbs 2. to encourage the tourists of the 3 cities to use the "green passport" of UNEP 3. to communicate on energy efficiency and renewable energy during the event, especially towards the young people 4. to monitor and assess the event 5. to measure carbon emission reduction result from the project 6. to manage the project	Could you please : -precise the number of solar powered appliances that are going to be installed (for each of the 6 cities). Explain the calendar of the implementation of component 1 and secure its feasibility. - be more specific about the way the "green passport" will be implemented (who will deliver the passport and the stamps...) - provide a communication plan for this project, to be discussed with GEF-Sec. The GEF has to figure prominently in the communication as the first donor of the project.	Included in Project document section 3.4

		<p>Create awareness for the environment. Plus, They are linked to high investments (stadiums, transport infrastructure...) that need to be "greened". During the 2010 FIFA World Cup, the project will develop a pilot on solar appliances in 6 stadiums and implement a system of "green tourism" in 6 host cities (awareness raising of the people coming to see the games). The project will also draw the lessons of the greening of the event to address the same issue in the next major sport events, in partnership with the FIFA.</p> <p>Component 1: this component will showcase the use of solar powered equipments (street lighting, traffic lights, billboards at airports and stadia, EE light bulbs) in 3 host cities. But the PIF says page 3 : "demonstration of solar technologies does not provide immediate carbon savings because if there was no demonstration at all, the emissions would be minimal" = we thus understand that these solar appliances do not substitute for non-solar appliances, but come in addition to the normal appliances. Can it be considered as Incremental ? The direct environmental benefits cannot be considered as Demonstrated. A "best practice document" will then be realized to disseminate the experience, but in fact this component seems very</p>		
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		<p>broader (6 cities and not 3) and the technologies are more focused on solar technologies, which is consistent with South Africa strategy and the possibilities of replication in cities after the event.</p> <p>8-24-9- the project focuses on the use of solar power technologies for street lighting and information billboards around 6 stadiums (out of 9 stadiums). That seems to be a correct choice, because these infrastructures are easy to install and can be ready for June 2010, even if it will be tight. Moreover, it was clarified that these investments would be the first step of a national strategy led by the National Energy Efficiency Agency to install solar powered street lights.</p> <p>Component 2 : this component will build on the UNEP "green passport" program. The objective is to have 30% of the spectators in 3 host cities using the green passport objectives. It is not clear what kind of environmental benefits this component will have, and these benefits seem to be more local than global. Moreover, the green passport has already been developed and the incrementality of GEF funding is not clear.</p> <p>4-22-9 - This component will raise awareness among the people coming to see the games. It will deliver global environmental benefits directly (during the event) and can</p>		
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		<p>This event seems to be already well organized, and the incrementality of GEF funding is not demonstrated. In addition, it is not clear what kind of environmental benefits this component will have, and these benefits seem to be more local than global.</p> <p>4-22-9 - This component has been dropped. Components 4 and 5 are not enough developed to be assessed.</p> <p>4-22-9 - Component 4 and 5 have been merged in a stronger component dedicated to the replication of the good practices of this event.</p> <p>Consequently :</p> <ul style="list-style-type: none"> - the incrementality of the project is not clear, neither its global environmental benefits - the components are not related to each other - the project design do not appear to 		
	10.Is the project consistent with the recipient country's national priorities and policies?	<p>Yes. South Africa intends to demonstrate its commitment to responsible environmental management during the World Cup. The 9 host cities have developed detailed action plans to guide the greening of the World Cup. The department of environment and tourism and the organizing committee have developed</p>	<p>Please elaborate on the plans of the municipalities and of the National Energy Efficiency Agency to install solar powered appliances and lighting.</p>	<p>Included in Project document sections 2 and 3</p>

	11.Is the project consistent and properly coordinated with other related initiatives in the	Yes		
	12.Is the proposed project likely to be	To date, it cannot be assessed.		
	13.Has the cost-effectiveness sufficiently been demonstrated in project		Please elaborate on the global environmental benefits expected from the project.	Elaborated in Section 3 of the project document
	14.Is the project structure sufficiently			
	15.Does the project take into account potential major risks, including the consequences of climate change and includes	The risks are identified.		
Justification for GEF Grant	16.Is the value-added of GEF involvement in the project clearly demonstrated through incremental reasoning?	The PIF explains page 3 that South Africa has launched many actions to green its World Cup, in partnership with FIFA. The 9 host cities have developed detailed action plans to guide the greening of the World Cup. The department of environment and tourism and the organizing committee have developed comprehensive guidelines for greening of mega sport events and a national greening 2010 framework was established. As a consequence, we could consider that GEF funding for the greening of this event is not incremental. But the PIF also says page 6 : "the focus of South Africa and the Local Organizing Committee is on meeting the deadlines to host the 2010 world		

		incremental. 4-22-9 - Please elaborate on the incrementality of the project.	
	17.Is the type of financing provided by GEF, as well as its level of concessionality, appropriate?		
	18.How would the proposed project outcomes and global environmental benefits are affected if GEF does not invest?		
	19.Is the GEF funding level of project management budget appropriate?	GEF funding for the project management component is 10% of GEF total grant.	
	20.Is the GEF funding level of other cost items (consultants, travel, etc.) appropriate?		
	21.Is the indicative co-financing adequate for the project?	GEF = \$2,000,000 Co-financing = \$2,320,000 In this co-financing, \$1,120,000 is "in-kind" and \$1,000,000 is cash. This fact underlines that the project as it is today is more opportunistic than incremental. 4-22-9 - The co-financing is very low.	
	22.Are the confirmed co-financing amounts adequate for each project component?		
	23.Has the Tracking Tool ³ been included with information for all relevant indicators?		
	24.Does the proposal include a budgeted M&E Plan that monitors and measures results with indicators and targets?		
Secretariat's Response to various	STAP		
	Convention Secretariat		
	Agencies' response to GEFSEC		

comments from:	comments		
	Agencies' response to Council comments		
Secretariat Decisions			
Recommendations at PIF	25. Is PIF clearance being recommended?	<p>No, because the project as it is today does not appear to be incremental, transformational, and because it's global environmental benefits do not appear clearly. It is proposed to focus the project on concrete actions and to drop the awareness raising components. You could for example build on the greening 2010 action plan, and identify actions in the 9 host cities that would not take place without an external assistance or financing. It could also be useful, after the project, to have an evaluation of the greening 2010 plan and write a brochure presenting all the actions implemented through the greening 2010 plan (dissemination to other global events).</p> <p>4-24-9 - No. Please increase the co-financing and elaborate on the incrementality of the project. This project should be an MSP.</p> <p>8-24-9- Yes</p>	
	26. Items worth noting at CEO Endorsement.	Please provide a communication plan for this project, to be discussed with GEF-Sec. The GEF has to figure prominently in the communication as the first donor of the project.	
	27. Is CEO Endorsement being recommended?		
Recommendation at CEO Endorsement			
Review Date	1 st review		
	2 nd review		

Review Criteria	Decision Points	Program Manager Comments
PPG Budget	1. Are the proposed activities for project preparation appropriate?	
	2. Is itemized budget justified?	
	3. Is the consultant cost reasonable?	
Recommendation	4. Is PPG being recommended?	
Other comments		
Review Date	1 st review	
	2 nd review	

ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT USING GEF RESOURCES

<i>Position Titles</i>	<i>\$/ person week*</i>	<i>Estimated person weeks**</i>	<i>Tasks to be performed</i>
For Project Management			
Local			
Project Coordinator	1,166	57	Responsible for overall management, planning and coordination of the project activities
Project Administrator	200	40	Responsible for the financial and administrative activities of the project including tracking the disbursement of project funds in compliance with UNEP rules and procedures
International			
None			
Justification for Travel, if any: Site visits to the six host cities to monitor implementation of the project			
For Technical Assistance			
Local			
EE Specialist	1,500	40	Core member of the project team, a) creating continuity within the PMU, b) develop the energy efficiency implementation plan for six host cities, c) oversee procurement process of technical services, d) provide technical leadership for other short-term consultants and service providers, e) produce periodic reports, f) supervise data collection on energy savings.
Promotion and Marketing Specialist	1,500	10	External consultant to execute the 2010 Green Passport Initiative and responsible tourism and s project element.
Independent Evaluation Specialist	1500	25	Collect and prepare lessons learned in hosting the 2010 FIFA World Cup™. Detailed terms of reference will be developed.
International			
Justification for Travel, if any: limited budget to cover site visits, project installation, liason and promotion			

* Provide dollar rate per person weeks or months as applicable; ** Total person weeks/months needed to carry out the tasks.

ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS

A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN.

N/A

B. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY: N/A

C. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW:

<i>Project Preparation Activities Approved</i>	<i>Implementation Status</i>	<i>GEF Amount (\$)</i>				<i>Co-financing (\$)</i>
		<i>Amount Approved</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>	<i>Uncommitted Amount*</i>	
	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
Total						

* Any uncommitted amounts should be returned to the GEF Trust Fund. This is not a physical transfer of money, but achieved through reporting and netting out from disbursement request to Trustee. Please indicate expected date of refund transaction to Trustee.

Notes on travel Budget:

ANNEX E: CALENDAR OF EXPECTED REFLows



UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente
Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة

联合国环境规划署



PROJECT DOCUMENT

SECTION 1: PROJECT IDENTIFICATION

1.1 Project title:

Reducing the Carbon Footprint of Major Sporting Events, FIFA 2010 and the Green Goal

1.2 Project number:

GFL/

PMS:

1.3 Project type:

MSP

1.4 Trust Fund:

GEF

1.5 Strategic objectives:

GEF strategic long-term objective:

CC1

Strategic programme for GEF IV:

CC SP1

1.6 UNEP priority:

Resource efficiency - sust. consumption/production

1.7 Geographical scope:

National

1.8 Mode of execution:

National Execution (NEX)

1.9 Project executing organization:

UNEP

1.10 Duration of project:

14 months

Commencing: December 2009

Completion: February 2011

1.11 Cost of project

US\$

%

Cost to the GEF Trust Fund

1,000,000

Co-financing

8,613,411

GEF Trust Fund

1,000,000

Sub-total

1,000,000

10.4

Project Government

8,613,411

Bilateral (Grant)

Multilateral Agencies

Sub-total

8,613,411

89.6

Total

9,613,411

100

1.12 Project summary

- 2 The overall goal of this project is to showcase best practice carbon offset energy efficient projects in order to promote and build awareness of renewable energy, and its application on energy efficient technologies during the FIFA 2010 World Cup. These best practices are intended to increase the awareness of these technologies globally following their successful demonstration. The Green Goal 2010 programme seeks to ensure that the 2010 FIFA World Cup has a long-term sustainable impact on the country and the region. South Africa has made provisions for achieving carbon neutrality by reducing the carbon footprint generated as a result of the World Cup through mitigative interventions, and secondly, offsetting the remaining emissions by encouraging and promoting projects that invest in reducing Greenhouse gas emissions. A study conducted on a carbon neutral 2010 FIFA World Cup in South Africa¹ reports that the 2010 FIFA World Cup will have the largest carbon foot print compared to similar global events, and will emit an estimated 896,611 tonnes of carbon dioxide equivalent to (tCO₂e) with an additional 1, 896, 589 tCO₂e and 340,128 tCO₂e contributed by international travel and accommodation respectively.

The objective of the project is to implement initiatives that will reduce greenhouse emissions and demonstrate the emission mitigating potential of efficient public appliances and the role of renewable energy. Moreover, the project's aim is to popularise these approaches with decision-makers and the general public during the 2010 FIFA World Cup event in South Africa. The focus is to demonstrate how carbon emission can be reduced, using projects that use renewable energy to compensate for the greenhouse emission generated from hosting such an event. The results of these initiatives will serve to inform and provide best practice for future major sporting events, by promoting environmental awareness and respect for the environment among the public through the utilisation of the popularity of sports. The primary objectives of the project are to:

- 1) Reduce energy consumption by retrofitting solar panel on public street lights, traffic lights and billboards in the six host cities.
- 2) Promote low carbon participation, through the activation of the Green Passport programme which promotes green standards in tourism and accreditation, and an awareness programme.
- 3) Implement monitoring and assessment of the programme through the measuring of carbon emissions reduction results from the project, which will use this sport event to change practices and behaviour.

¹ Department of Environmental Affairs and Tourism (DEA), and the Norwegian Government (NORAD), Feasibility Study for a Carbon Neutral 2010 FIFA World Cup in South Africa, 2009.

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ACRONYMS AND ABBREVIATIONS

CC	Climate Change
CDM	Clean Development Mechanism
CCS	Carbon Capture Storage
CEF	Central Energy Fund
CER	Certified Emission Reduction
CO ₂	Carbon Dioxide
DEA	Department of Environmental Affairs
DT	Department of Tourism
DEFRA	Department for Environment, Food and Rural Affairs(UK)
DNR	Direct Normal Radiation
DE	Department of and Energy
FIFA	Fédération Internationale de Football Association
FEDHASA	Federated Hospitality Association of Southern Africa
IDP	Integrated Development Plan
GHG	Greenhouse Gas
HVAC	Heating, ventilation, and air-conditioning
JCL	Johannesburg Climate Legacy
Km	Kilometre
KWh	Kilowatt hours
LOC	Local Organizing Committee
LRMC	Long Run Marginal Costs
LTMS	Long Term Mitigation Strategy
MWp	Megawatt power
MWh	Megawatt hours
PV	Photovoltaic
NMSRT	National Minimum Standards for Responsible Tourism
NERSA	National Energy Regulator South Africa
SA	South Africa
SATGC	South African Tourism Grading Council
REFIT	South African Energy Feed in Tariff
tCO ₂	Tonnes Carbon Dioxide
tCO ₂ e	Tonnes Carbon Dioxide equivalent
TDM	Transport Demand Model
UNEP	United Nations Environment Programme
WSSD	World Summit on Sustainable Development

SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)

2.1. Background and Context

South Africa's hosting of the FIFA 2010 World Cup will be one of the most important global events to take place in the African Continent. Studies indicate that the FIFA 2010 World Cup will have the largest carbon footprint of any major events with a goal to be climate neutral. Throughout the world, major sporting events are now recognised as having a global environmental impact. Large numbers of spectators travel to and from these events, spend money, consume resources and generate waste. Food, water and energy consumption rises significantly during such events. These impacts raise concerns about the total environmental footprint of such events, particularly with respect to carbon emissions, water, energy, waste and transport. These concerns must be translated into responsible action to minimize and mitigate the impacts of such large events, and additionally, build awareness among host communities and visitors about why it is necessary to reduce the impact of these events on the environment. Event greening is therefore about contemplating the environmental and social consequences of the choices made when hosting large events.

2.1.1. It is with this understanding that the DEA with support from NORAD, commissioned a feasibility study that estimated carbon footprint of the 2010 FIFA World Cup is estimated to be 896,611 tonnes of carbon dioxide or an equivalent of 1, 896, 589 tCO₂e contributed by international travel to the event. Second, is the energy use in accommodation estimated to be 340,128 tCO₂e or 12 % with the third emission drawn from stadia and stadia precinct use of energy at 16,637 tCO₂e. South Africa initiated a major role in the field of carbon neutral events through their activities during the 2002 World Summit on Sustainable Development(WSSD). Since then, the world has seen the emergence of carbon neutral branding of major events gaining popularity with the 2006 Winter Olympics, FIFA 2006 World Cup, Commonwealth Games 2002, and now the FIFA 2010 making commitments to offset their emissions. The Green Goal 2010 programme seeks to ensure that the FIFA World Cup has a long term sustainable impact on the country and the region. The programme has made provisions for achieving carbon neutrality by reducing the carbon footprint generated as a result of the World Cup through mitigative interventions, and secondly, offsetting the remaining emission by encouraging and promoting projects that invest in reducing Greenhouse gas emissions.

2.1.2. **Climate Neutrality and Sport**². UNEP produced an Independent Environmental Assessment: Beijing 2008 Olympic Games in February 2009, documenting lessons learnt from their greening activities and support to the Olympics. They highlighted that ‘the amount of carbon released into the atmosphere directly or indirectly as a result of all the activities associated with the Games is what we are challenged to measure, offset and curtail. Arguably, the measurement of the climate impact of an Olympic and Paralympics Games should include the activities undertaken in all phases of the Games, from the early planning stages to Games-time. It should also cover travel, in particular international travel, by athletes, officials, spectators and the media.’ UNEP’s Assessment provided a strategy for attaining climate neutrality which said:

‘A strategy towards achieving climate neutrality for the Games involve:

- Measuring the carbon footprint of the event;
- Reducing energy demand;
- Increasing energy efficiency;
- Expanding the use of renewable energy, and
- Compensating or offsetting “unavoidable” emissions.’

The main focus of such a strategy should be to reduce greenhouse gas emissions at the source. Offsetting is only a second best option. Carbon offsets are activities that compensate for carbon or greenhouse gas emissions in one area by reducing them in another, ensuring that there is no net increase in emissions.

² Independent Environmental Assessment: Beijing 2008 Olympic Games. United Nations Environment Programme (UNEP) in February 2009.

Projects that generate carbon offsets typically reduce greenhouse gas emissions by improving energy conservation, development of renewable sources of energy (including wind, solar, small hydro, geothermal and biomass) and carbon sequestration (i.e. tree planting which increases CO₂ removal through photosynthesis). They are traded through international brokers and carbon markets, online retailers and trading platforms in the way that stocks, bonds and mutual funds are sold.

Organizers of upcoming major sports events (the Olympic Games, the FIFA World Cup, and the Rugby World Cup) and sports organizations in general, should be encouraged to seriously look at their carbon footprint and seriously analyze primary data from events. It should be noted that any activity that claims to be climate neutral should have a zero net impact on climate change.

Efforts to mitigate and offset emissions should be a collective responsibility of the organizers, suppliers, contractors, sponsors, spectators, countries and organizations participating in the event. Organizers and countries hosting mass events are encouraged to look for creative ways of engaging all stakeholders, including the above-mentioned groups, in efforts to reduce their emissions.

- 2.1.3. This GEF funded Medium Sized project - *Reducing the Carbon Footprint of Major Sporting Events, FIFA 2010 and the Green Goal* - will go a long way toward contributing to host cities efforts in meeting the 5% 'minimum environmental standards' target set in the Green Goal 2010. Among the Green Goal 2010 targets is the proposal that host cities offset their carbon foot print through mitigative projects. In addition, the Green Goal 2010 requires host cities to purchase 'green electricity' from sources that are registered with the South African Tradable Renewable Energy Certification Programme, in order to cover the electricity demand of stadia and stadia precincts during the 2010 FIFA World Cup™. However, the challenge for host cities is that they will have to source electricity from Eskom, the national electricity supplier, which uses coal sources that are largely responsible for the emission of sulphate and nitrate oxide greenhouse gases.
- 2.1.4. The 2010 FIFA tournament features 64 matches distributed over 10 stadia, including energy consumption demands at the stadia. It should be noted that all electricity demands are currently supplied from the national grid and, while all stadia have been fitted with diesel generators, it is estimated that mmissions from the generators will be similar to the electricity grid and have no or little impact in reducing carbon emission. Given the seating capacity and the number of World Cup days events at the stadia, the overall carbon footprint including the International Broadcast Centre(IBC) is estimated to be 16,637tCO₂e or 16,696 MWh of total electricity consumed during the 64 days of the tournament.
- 2.1.5. The second source of carbon emissions is energy consumption sources from accommodation and the hospitality industry. Studies indicate that 29KWh is consumed per person on an overnight stay at the hotel. It is estimated that an average visitor will stay an estimated 55 days during the 2010 World Cup (this seems higher than the figure I recalled – please re-check) and the carbon footprint over that period is estimated to be 340,128tCO₂e. The activation of the UNEP's Green Passport will serve to inform visitors on ways in which they could reduce their own carbon footprint during their stay at various hospitality facilities.
- 2.1.6. The GEF funding will be utilized to implement energy reduction projects in six host cities, namely, i) City of Tshwane (Pretoria) Metropolitan Municipality(TMM), ii) City of Johannesburg Metropolitan Municipality (CoJ), iii) Nelson Mandela Metropolitan Municipality (NMMM), iv) City of Cape Town Metropolitan Municipality (CPT), v)Polokwane Local Municipality (PLM), and vi)Rustenburg Local Municipality(RLM).
- 2.1.7. In particular, funding will assist the host cities to reduce their energy consumption by retrofitting public street lights, traffic lights and billboards in and around the stadia with energy efficient appliances and solar panels. The long-term benefits of this initiative on host cities and other municipalities in particular, will be to help to reduce the cost of maintenance and the cost of energy purchased from the main electricity generator, Eskom. In addition, a key local impact of this improved and more efficient illumination through the introduction of

efficient energy sources will provide for better and brighter illumination, thus making the streets upgraded to efficient energy sources of power safer for citizens use during hours of darkness.

- 2.1.8. The energy efficient traffic lights will reduce transportation and traffic problems related with power failures, as these traffic lights will operate without backup power for up to five days. This will save the public time and money, and there will be a reduction in carbon emissions from vehicles idling, as a result of traffic delays due to non-functioning traffic lights.
- 2.1.9. Historically, for many international climate-neutral events, the offset projects are not implemented until after the end of the event. South Africa is planning ahead by ensuring that at least some of these projects are implemented at an early stage, and located in areas that are visible to local and international spectators. The offset projects will contribute to raising public awareness relating to efficient and effective energy usage in public utilities, such as street lighting, traffic junctions and public announcement billboards that require lighting. The documentation of the implementation process, measuring the impact from an efficient energy usage perspective and on the impact on the quality of life on the citizenry at a local municipal level, will enable UNEP/GEF to take the lessons learned from a local (country) level and replicate it at a global level. Such technology-related projects which are easy for the general public to see and to promote its benefits, will increase awareness on the use of alternative sources of energy..

2.2. Global Significance

The 2010 FIFA World Cup™ accelerated efforts to improve environmental quality and provide new perspectives on environmental protection. An overarching aim of 2010 Green Goal effort is to ensure that the 2010 FIFA World Cup™ is a carbon neutral event. This specifically relates to ensuring low climate change impact through the reduction of GHG emissions. Where GHG emissions cannot be avoided, they will be mitigated through a range of Green Goal 2010 carbon mitigation projects. Hosting a carbon neutral event, and reducing its carbon footprint, can be achieved through integrating energy efficiency, waste reduction and avoidance, and water conservation with all activities related to the event. However, the World Cup added impetus to enable the aggressive implementation of these plans.

- 2.2.1. The post-2012 Kyoto Frameworks will powerfully influence prospects for addressing climate change—mitigation and adaptation. Negotiations on that framework will be shaped by governments with very different levels of negotiating leverage. Powerful vested interests in the corporate sector will also make their voices heard.
- 2.2.2. As governments embark on the negotiations for a post-2012 Kyoto Protocol, it is important that they reflect on two constituencies with a limited voice but a significant claim to social justice and respect for human rights: The world's poor and future generations. Put bluntly, the world's poor and future generations cannot afford the complacency and prevarication that continues to characterize international negotiations on climate change. Nor can they afford the large gap between what leaders in the developed world say about climate change threats and what they do in their energy policies.
- 2.2.3. **The 21st Century climate challenge³** - Global warming is already happening. According to the Human Development Report 2007/08, World temperatures have increased by around 0.7°C. There is overwhelming scientific evidence linking the rise in temperature to increases in the concentration of greenhouse gases in the Earth's atmosphere.
- 2.2.4. Climate change is considered to be one of the most serious threats to sustainable development, with adverse impacts expected on the environment, human health, food security, economic activity and investment, natural resources and physical infrastructure. The poorer, developing countries are the least equipped to adapt to the potential effects of climate change.

³ HUMAN DEVELOPMENT REPORT 2007/2008 (UNDP/UNEP): Fighting Climate Change: Human Solidarity in a Divided World

- 2.2.5 The most recent, the Intergovernmental Panel on Climate Change (IPCC) report⁴ concluded that global temperatures are rising, that this is caused largely by human activities and, in addition, that for increases in global average temperature, there are projected to be major changes in ecosystem structure and function with predominantly negative consequences for biodiversity and ecosystems.
- 2.2.6 As the international community, South Africa included, works towards keeping global average temperature increase below 2°C compared to pre-industrial levels. There is an equally important drive to ensure that the globe and more specifically for us, that South Africa is prepared to deal with the changes in global temperatures that are and will happen due to the Greenhouse gas emissions that have already occurred and those that will continue to occur while the international and national policy frameworks are being agreed on, developed and/or implemented.
- 2.2.7 Business-as-usual trajectories are likely to take the world well beyond that threshold. To have a 50:50 chance of limiting temperature increase to 2°C above pre-industrial levels will require stabilization of greenhouse gases at concentrations of around 450ppm CO₂e. Stabilization at 550ppm CO₂e would raise the probability of breaching the threshold to 80 percent. In their personal lives, few people would knowingly undertake activities with a serious injury risk of this order of magnitude. Yet as a global community, we are taking far greater risks with planet Earth. Some scenarios for the 21st Century point to potential stabilization points in excess of 750ppm CO₂e, with possible temperature changes in excess of 5°C.
- 2.2.8 Temperature scenarios do not capture the potential human development impacts. Average changes in temperature on the scale projected in business-as-usual scenarios will trigger large-scale reversals in human development; undermining livelihoods and causing mass displacement. By the end of the 21st Century, the spectre of catastrophic ecological impacts could have moved from the bounds of the possible to the probable. Recent evidence on the accelerated collapse of ice sheets in the Antarctic and Greenland, acidification of the oceans, the retreat of rainforest systems and melting of Arctic permafrost all have the potential—separately or in interaction—to lead to ‘tipping points’.
- 2.2.9 Countries vary widely in their contribution to the emissions that are driving up atmospheric stocks of greenhouse gases. With 15 percent of world population, rich countries account for almost half of emissions of CO₂. High growth in China and India is leading to a gradual convergence in ‘aggregate’ emissions. However, per capita carbon footprint convergence is more limited. The carbon footprint of the United States is five times that of China and over 15 times that of India. In Ethiopia, the average per capita carbon footprint is 0.1 tonnes of CO₂, compared with 20 tonnes in Canada.

2.3 Threats, root causes and barrier analysis

- 2.3.1 There are significant barriers to the further implementation of renewable energy that need to be addressed. The key issues include the following:
- Many renewable energy technologies remain expensive, on account of higher capital costs, compared to conventional energy supplies for bulk energy supply to urban areas or major industries
 - Implementation of renewable energy technologies needs significant initial investment and may need support for relatively long periods before reaching profitability.
 - There is a lack of consumer awareness on benefits and opportunities of renewable energy.
 - The economic and social system of energy services is based on centralised development around conventional sources of energy, specifically electricity generation, gas supplies and, to some extent, liquid fuel provision.
 - Financial, legal, regulatory and organisational barriers need to be overcome in order to implement renewable energy technologies and develop markets.

⁴ IPCC working group 1 report for the 4th assessment report : The physical Science basis (May 2007)

- There is a lack of non-discriminatory open access to key energy infrastructure such as the national electricity grid, certain liquid fuels and gas infrastructure.

2.3.2 Institutional, Sectoral and Policy Context

Various policy documents frame the government's policies and strategies for Climate Change, and Energy Efficiency and the reduction of greenhouse gases in South Africa. Furthermore, the proposed project is specifically aligned with key national policies and strategies that address energy efficiency and climate change and sustainable development in the country. In addition, the project is aligned with the host city municipality Greening plans, the DEA's National Greening 2010 Framework and the Guidelines for Greening of Large sport events with an emphasis on the FIFA World Cup™, and the LOC 2010 FIFA Green Goal programme.

2.3.3 The National Policy Context –

The *Constitution* (Act No. 108 of 1996) provides the legal basis for allocating powers to different spheres of Government and contains a number of rights specifically relevant to the national energy policy. The *Constitution* states that Government must establish a national energy policy to ensure that national energy resources are adequately tapped and delivered to cater for the needs of the nation. Energy should be made available and affordable to all citizens, irrespective of geographic location. The production and distribution of energy should be sustainable and lead to an improvement in the standard of living of citizens.

The *Bill of Rights* provides that:

“Everyone has the right (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations through reasonable legislative and other measures that -
(i) Prevent pollution and ecological degradation;
(ii) Promote conservation; and
(iii) Secure ecologically sustainable development and the use of natural resources while promoting justifiable economic and social development.”

Chapter 2, Bill of Rights of the Constitution further states: *“The State must respect, protect, promote and fulfil the rights in the Bill of Rights”*.

In order to meet the Government's obligations in this regard, the *White Paper on Energy Policy* states that:

Government will work towards the establishment and acceptance of broad targets for the reduction of energy related emissions that are harmful to the environment and to human health.

2.3.4 The Climate Change Response Strategy (2004) aims to guide South Africa's response to climate change, and proposes a number of priority actions relating to pollution, waste management, energy, agriculture and water. The strategy will help government departments to develop plans of action for integrating climate change issues into their policies and practices. Although the Department of Environmental Affairs has been designated as the lead agency for climate change response in South Africa, it is recognized that this is a cross cutting issue that has implications for diverse activities in other government departments, and thus requires that response measures are properly directed coordinated and carried out with a national focus.

2.3.5 The Climate Change Policy (2009) ensure that South Africa reduces emissions towards a 'low carbon economy' while also helping to limit the effects of global warming.

2.3.6 The Long Term Mitigation Scenarios (LTMS) study commissioned by the Department of Environmental Affairs, lays a firm basis for a progressive National Policy on Climate Change. Following the recent Climate Change Summit, which formally launched the policy process that aims to translate the LTMS into fiscal, regulatory and legislative packages as well as sectoral implementation plans, South Africa has committed internationally to stabilizing greenhouse gas emissions by between 2020 and 2025, and will plateau for ten years and then decrease thereafter. The Carbon Capture Storage⁵ therefore forms part of the mitigation

⁵ According to a recent report, Carbon Capture and Storage (CCS) is described as involving the capturing of carbon dioxide that would otherwise be emitted to the atmosphere and injecting it to be stored in deep geological formations. Carbon dioxide is typically captured from

measures addressed in the Long Term Mitigation Scenario (LTMS) planning of the Department of Environmental Affairs and Tourism.

- 2.3.7** The Environmental Management Policy for South Africa was formalized on 28 July 1997. It is the government's national policy on environmental management. It sets out the vision, principles, strategic goals and objectives and regulatory approaches that government will use for environmental management in South Africa. It is an overarching framework policy. Specific subsidiary and sectoral policies to carry forward the detailed tasks of everyday governance will resort under this framework.
- 2.3.8** The first National Energy Efficiency Strategy⁶ was published in March 2005 with the proviso that it would be reviewed every 3 years. This document was drafted after consultation with stakeholders during October 2008 and is known as the first review of the National Energy Efficiency Strategy of 2008. South Africa is a developing nation with significant heavy industry, which is by its nature energy intensive. This energy intensive economy largely relies on indigenous coal reserves for its driving force. At first sight there would appear to be an apparent paradox between using less energy and developing a healthy and prosperous nation based on energy intensive activities. This is not the case. In recent years especially since 2005 and the release of the first Energy Efficiency Strategy, energy efficiency has significantly gained in stature in South Africa and has become recognized as one of the most cost effective ways of meeting the demands of sustainable development.
- 2.3.9** The existing energy policy of South Africa is captured within the *White Paper on Energy Policy* (1998) as well as the recently promulgated Energy Act (2008). The policy and Act aim to provide the nation with wider access to energy services, by various means, whilst ensuring that the environmental impacts of energy conversion and use are minimized as far as possible. This is of relevance to Africa as a whole, as South Africa uses some 40% of the total electricity consumed within the continent. South Africa is endowed with rich deposits of minerals and fossil fuel in the form of coal. South Africa's abundant coal reserves have partially contributed towards an economic environment wherein the unit price of electricity is amongst the cheapest in the world. One of the undesirable side effects of this has been that energy efficiency has been demoted to make way for "priority" considerations, such as plant expansions and increases in production throughput. In recent years the issue of energy efficiency has attracted more interest in South Africa, and a number of initiatives and projects have proven the merits of enhanced energy performance. The 2002 World Summit on Sustainable Development, held in Johannesburg, recognized energy efficiency as a key tool to enhance clean energy development and to mitigate the negative effects of energy use upon the environment.
- 2.3.10** The benefits of energy efficiency upon the environment are self-evident. These benefits are of particular relevance, as South Africa remains one of the highest emitters of the Greenhouse gas CO₂ per capita in the world. At a local level, the problems of CO₂ and smoke emissions have been the focus of concern for many communities living adjacent to heavily industrialized areas. Energy efficiency can address both the macroscopic and microscopic aspects of atmospheric pollution. In short, energy efficiency is fast gaining ground as a cost-effective means to approach all aspects of sustainability. It is generally accepted that South Africa holds numerous opportunities for energy savings, together with pollution mitigation measures of international

large industrial point sources, compressed into liquid form and injected it into deep geological formations, such as saline reservoirs, coal seams, or depleted oil and gas fields. CCS is currently the only technology available to make deep cuts in greenhouse gas emissions while still using fossil fuels and much of today's energy infrastructure. In fact, there are many places around the world where carbon dioxide is already stored today. The International Energy Agency describes it as "one of the most promising options for mitigating emissions in the longer term". However, it is important to note that CCS is not a replacement for taking actions which increase energy efficiency or maximize the use of renewable or other less-carbon-intensive forms of energy. A portfolio approach, taking every opportunity to reduce emissions, will be required to meet the challenge of minimizing global climate change and reducing South Africa's greenhouse gas footprint. As a result of the findings of the LTMS study and the potentially significant reduction of the country's carbon dioxide footprint through CCS, the South African government has declared CCS a national research priority. A National Centre for Carbon Capture and Storage was launched on the 27 March 2009 during a Charter Signing Ceremony. The establishment of the Centre will facilitate South Africa's development of one of the most promising potential Climate Change mitigation measures

⁶ Energy Efficiency Strategy of the Republic of South Africa - first Review October 2008

significance. This Strategy offers a consolidated approach in order to capture these opportunities in the best interests of our nation.

2.3.11 The National Energy Efficiency Strategy sets a national target for energy savings, of at least 12%, to be achieved by 2015. This target is expressed in relation to the forecast national energy demand at that time, based on the ‘business as usual’ baseline scenario for South Africa modelled as part of the National Integrated Energy Plan (2003), which uses energy consumption data for the year 2000. The target also assumes that the Energy Efficiency interventions outlined in this Strategy are undertaken; these measures being primarily focussed on low cost interventions that can be achieved with minimal investments.

2.3.12 Assuming the target is achieved in 2015 the following estimates give an indication of the possible monetary savings that could be achieved by implementing the strategy.

Potential Monetary Savings achievable by implementing the Energy Efficiency Strategy: Electricity (Saving) Target 12% By 2015			
Saving in Peta Joules	Million kWh	Average cost	Total Cost (U.S.\$)
29	8.055555556	0.2	214,814.82
45	12.5	0.2	333,333.33
63	17.5	0.3	700,000.00
81	22.5	0.3	900,000.00
101	28.05555556	0.4	1,496,296.30
<u>Total for 5 years</u>			<u>3,644,444.44</u>

In cost-benefit terms the best measurement stick is the payback period. In Phases 1 and 2 the majority of interventions will involve no cost or low cost. This means that the South African economy will make low cost gains in efficiency. In the case of low cost measures the payback period will be less than 3 years during which period the investment in equipment will be off-set by the savings.

2.3.13 At the Rio de Janeiro Earth Summit of 1992 the United Nations Framework Convention on Climate Change stated that its fundamental objective was to achieve stabilization of the concentrations of Greenhouse gases (GHGs) in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. South Africa ratified the Convention in 1997, which enables South Africa to apply for financial assistance for climate change related activities from the Global Environmental Facility.

2.3.14 The White Paper on the Promotion of Renewable Energy and Clean Energy Development: Part One – Promotion of Renewable Energy (herein referred to as the White Paper) supplements the *White Paper on Energy Policy*, which recognises that the medium and long-term potential of renewable energy is significant. This Paper sets out Government’s vision, policy principles, strategic goals and objectives for promoting and implementing renewable energy in South Africa. It also informs the public and the international community of the Government’s vision, and how the Government intends to achieve these objectives; and informs Government agencies and organs of their roles in achieving the objectives.

2.3.15 The *White Paper on Energy Policy*’s position with respect to renewable energy is based on the integrated resource planning criterion of: ‘*Ensuring that an equitable level of national resources is invested in renewable technologies, given their potential and compared to investments in other energy supply options.*’ Government intends to provide the necessary incentives, South Africa’s fiscal resources are limited, and there are competing high priority social and economic programs, particularly in providing services to historically disadvantaged communities. Hence, the financial resources for these incentives will have to come from a combination of South African and international sources.

- 2.3.16** South Africa has already ratified the United Nations Framework Convention on Climate Change (1997) and the Kyoto Protocol (2002), which creates the framework for tapping international funds *via* the Global Environment Facility and the Clean Development Mechanism to reduce greenhouse gas emissions. Government's long-term goal is the establishment of a renewable energy industry producing modern energy carriers that will offer in future years a sustainable, fully non-subsidised alternative to fossil fuels. The proportion of final energy consumption currently provided by renewable energy has come about largely as a result of poverty (e.g. wood and animal waste used for cooking and heating). To get started on a deliberate path towards this goal, the Government's medium-term (10-year) target is: *An additional 10 000 GWh (0.8 Mtoe) renewable energy contribution to final energy consumption by 2012, to be produced mainly from biomass, wind, solar and small-scale hydro.*
- 2.3.17** The Kyoto Protocol (1997) is an agreement under which industrialized countries (Annex 1 countries) will reduce their combined greenhouse gas emissions by at least 5% compared to 1990 levels by the period 2008 to 2012. Following recent ratification by Russia the United Nations Protocol has become legally binding on 16 February 2005, thereby committing the Annex 1 parties accounting for 61,6% of the total 1990 carbon dioxide emissions to achieve the 5% reduction by 2012.
- 2.3.18** South Africa acceded to the Kyoto Protocol in March 2002. Although the Kyoto Protocol does not commit the non-Annex 1 (developing) countries, like South Africa, to any quantified emission targets in the first commitment period (2008 to 2012), there is potential for low cost emission reduction options in these countries. The Clean Development Mechanism provides for trade in certified emission reductions between non Annex 1 countries and Annex 1 countries and thus supports sustainable development with respect to greenhouse gas emissions in developing countries while helping Annex 1 countries to comply with their commitments under the Kyoto Protocol.
- 2.3.19** Apart from the normal monitoring and evaluation associated with any policy, it was also agreed that there would be a mid-term assessment after five years (end of 2007), which would consider any changes required in policies, targets or implementation strategies, taking account of changes in costs of coal-based as well as renewable energy power generation, availability of international funds as well as any international obligations agreed-to by South Africa, and the South African budgetary situation. It should be noted that the mere availability of a renewable energy resource does not mean that that resource can readily be used as an energy source.

2.4 Stakeholder mapping and analysis

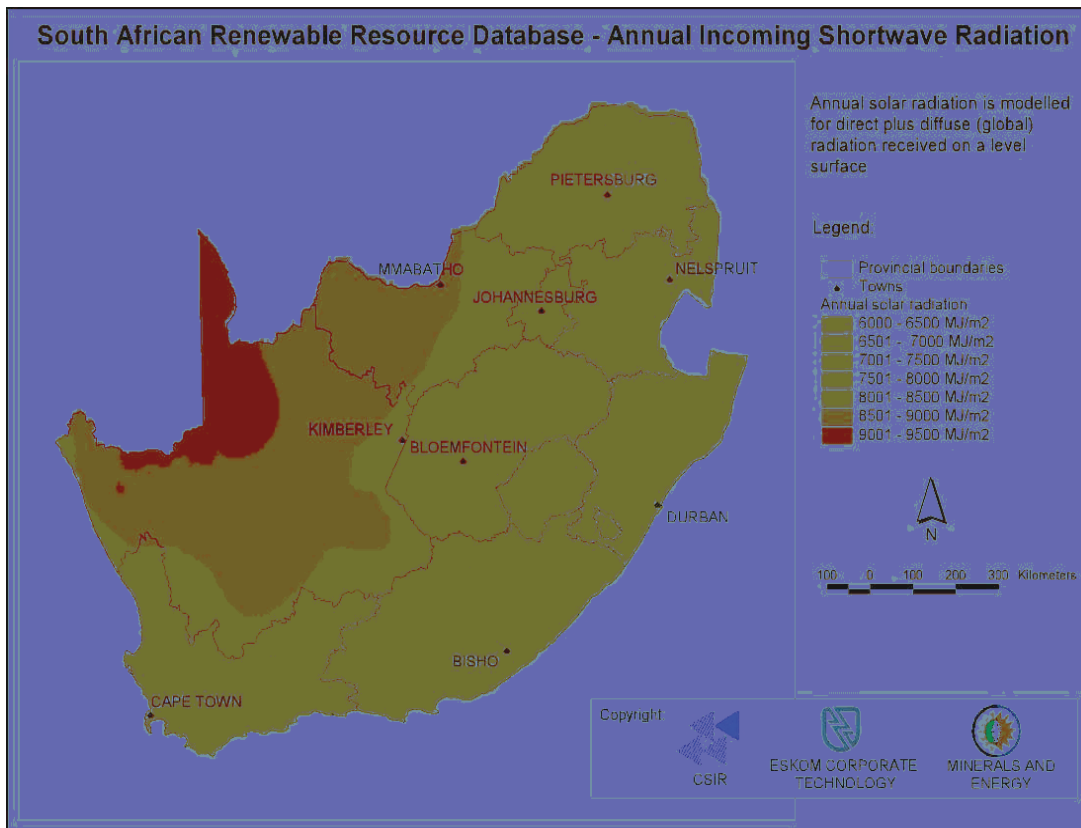
- 2.4.1.** The South African energy arena is characterized by a number of diverse role players each with a mandate within the fields of energy supply, conversion, efficiency and regulation. Only through well co-ordinated initiatives and promotion to activate the different role players will South Africa be able to effectively promote energy efficiency. As the mandated custodian of environmental management nationally, DEAs broad roles and responsibilities in relation to the 2010 greening programme are to provide overall leadership and coherence to the wide range of localized greening initiatives currently under way, including the driving of the carbon offset programme at a national and international level, and mobilizing resources and funding to support and implement provincial and local plans.
- 2.4.1** DEA will prompt the different stakeholders to take a leading role in their areas of responsibility on a sector- by-sector basis. The means will be information, regulation, promotion, and facilitation of an enabling capacity development framework, as well as the coordination of knowledge and actions where necessary, and publicized public comments.
- 2.4.2** Figure 8 shows how the key stakeholders will be involved in the strategic processes described in this document. Stakeholder relationships are shown against each implementing instrument, or focal area, in terms of primary stakeholders and secondary stakeholders. Primary stakeholders may be broadly defined as those whose main function deals directly with the associated focus area. Secondary stakeholders may be described as those whose responsibilities partly overlap with a particular focus area, or where their involvement would be of an *ad hoc* nature.

2.4.3 Figure 9 compares the major roles of the primary stakeholders across the sectoral initiatives proposed. These roles are defined in terms of strategic responsibility, implementation, and regulation and monitoring. The figure also indicates which stakeholders will be responsible for the Monitoring and Verification (M&V) of sectoral initiatives, as indicated in Section 3.5.

2.6 Baseline analysis and gaps

2.6.1 South Africa experiences some of the highest levels of solar radiation in the World. The average daily solar radiation in South Africa varies between 4.5 and 6.5 kWh/m² (16 and 23 MJ/m²) (Stassen, 1996), compared to about 3.6 kWh/m² for parts of the United States and about 2.5 kWh/m² for Europe and the United Kingdom. Figure 4 below shows the annual solar radiation (direct and diffuse) for South Africa, which reveals considerable solar resource potential for solar water heating applications, solar photovoltaic and solar thermal power generation.

Figure 4: Annual direct and diffuse solar radiation (DME, Eskom, CSIR, 2001)



The potential uses and applications include:

- Solar passive building design practice for residential, commercial and industrial buildings to minimise thermal energy consumed. This includes the energy that is consumed by the occupants, as well as that which is embedded in the construction of the building.
- Solar water heating for domestic, recreational, institutional and industrial use.
- Solar space heating - closely related to solar passive and active building design practice and can also include solar water heating technologies.
- Solar cookers as an alternative to cooking with fuel wood in the rural areas⁷ Agricultural use (e.g. crop drying, greenhouses), especially for small-scale farming.

⁷ GEF did support a Solar Cookers Project in SA that determined that the technology was unlikely to be successfully taken-up in the foreseeable future in SA because of several limiting factors.

- For electricity (photovoltaic and solar thermal) generation, ranging from small to medium-scale stand-alone applications to large-scale grid-connected applications.
- Heat pumps for water heating, space heating and cooling.

2.7.2 Potential for specific applications

Photovoltaic: Photovoltaic (PV) systems are widely applied for powering conventional and cellular telecommunications networks in South Africa. They are also applied in small-scale remote stand-alone power supplies for domestic use, game farms, and household and community water pumping schemes. Installed PV has solar to electric efficiencies in excess of 8% and typical load factor of 22%. The installed PV capacity is estimated at just over 8 MW_p (2000).

2.6.2 *Solar Thermal:* The minimum Direct Normal Radiation (DNR) to justify a combined solar thermal power plant is 1800 kWh/m² per year (van Heerden, 2002). According to the RRDB, the area exceeding the minimum required DNR in South Africa covers approximately 194 000 km². A 100 MW solar thermal plant requires roughly 3 km² (1800 kWh/m² per year). If 1% (1940 km²) of the identified area is available for solar thermal power generation: South Africa has an installed potential of 64.6 GW which is about 36 217 GWh/year or 3 MtCO₂e/year (16% solar to electric efficiency, 40% capacity factor). Back-up and energy storage constraints are limiting the wider economical utilisation of solar electricity generation (solar thermal and photovoltaic).

2.6.3 *Solar Water Heating:* Domestic solar water heating is currently about 1.3% of the solar energy market. Water heating accounts for an average of 30-50% of household electricity bills. Appropriate solar water heating systems have the potential to save up to 70% on water heating electricity costs and up to 40% on total household electricity costs. There is thus considerable scope to increase the application of solar water heating, which would contribute favourably to electricity demand-side management and deferral of new generation capacity. An increasing market for solar water heating would result in a growth in the relevant manufacturing industry and increased employment opportunities. The GEF supported a project that addressed the issues of market barriers for solar water heaters in South Africa. The results of this project have allowed ESKOM to rapidly roll-out their solar water heater subsidy support initiative.

2.6.4 Electricity prices in South Africa have historically been of the cheapest in the world. Wholesale prices vary from 9-12s KWh and retail between 15-30c KWh. In 2004, the Department of Minerals & Energy (DME) commissioned a number of studies in order to determine generation costs for various renewable energy technologies. The long Run Marginal Costs (LRMC) for conventional power was estimated to be about 30 cents/KW against which RETs must compete. However, some experts believe that because of the delays in construction costs and commodity price feedstock the likely LRMC is going to be in the range of 60c/KW.

2.6.5 Some precedents for preferential tariffs to support renewable energy projects have been pioneered by some local municipalities in South Africa. The City of Cape Town (CoCT), for instance offers the Darling Wind Farm (the first wind power project in South Africa) as a preferential rate of 37c/KW. The power is sold as Green power to private sector via Tradable Renewable Energy Certificate (TREC) partly facilitated through the GEF supported South African Wind Energy Project (SAWEP). A similar arrangement prevails at the Nelson Mandela Metro. However, there is a move away from this ad hoc system to a more systematic approach. NERSA (National Energy Regulator of South Africa) in May 2008, released draft guidelines for a South African Energy Feed-in Tariff (REFIT), that if accepted will significantly boost the renewable energy market in South Africa.

2.7 Linkages with other GEF and non-GEF interventions

The components proposed for implementation within this project are aimed at reducing the carbon footprint during the 2010 FIFA World Cup™ are aligned to other initiatives that are being undertaken by the South African government in hosting the tournament, which include, inter alia, i) a Feasibility Study for a Carbon Neutral 2010 FIFA World Cup in South, ii) development of a National Greening

Framework, iii) development of Greening Business Plans for 3 host cities, iv) the Green Review of Stadia, v) capacity building to all host cities implemented on guidelines for greening large sporting events, vi) development of implementation plan outlining 2010 Legacy Projects for host cities, vii) a Request for Proposal (RFP) has been issued for the development of a 'web based system for voluntary offsetting of carbon emissions resulting from air travel during the 2010 FIFA World Cup', and the development of a broader 'National Greening Legacy Framework and Strategy', viii) the development of an monitoring and evaluation tool, ix) development of a training manual for 2010 volunteers, and, x) the rollout of energy efficient public street lighting three metropolitan municipalities.

SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)

3.1. Project rationale, policy conformity and expected global environmental benefits

The Green Goal initiative of the 2006 FIFA World Cup™ represented the first time in the history of football that environmental considerations were placed at the forefront of activities. This initiative reduced the overall environmental impact of the event, including the GHG contribution. This was achieved through, among other things, implementing energy-efficiency measures, using renewable energy sources and environmentally friendly transportation. The 2010 FIFA World Cup™ will without doubt, bring to South Africa both positive and negative environmental impacts ever to be experienced from hosting such a major sporting event. Greening of the 2010 FIFA World Cup™ entails the incorporation of sustainable development principles into the planning, execution, reporting and monitoring of the event. The proposed project components are designed and aligned to complement government's initiatives aimed at ensuring that South Africa hosts a carbon neutral event in 2010. The project will add to the efforts by host cities who through their greening plans have undertaken measures to reduce the carbon footprint caused by the construction of infrastructure needed to host this tournament, including but not limited to the efficient use of energy. It is intended that through this project, some of the energy efficient technologies, i.e. (solar powered street and traffic lights, and bill boards located near or around stadia and port of entry and the activation of the UNEP's 2010 Green Passport) for the 2010 FIFA World Cup are implemented in areas that are visible to local and international spectators, thus contributing to raising public awareness. The global benefits of this project will be the successful reduction of carbon emission through projects that demonstrate reduction in energy consumption, responsible tourism and raising awareness around impact of climate change during the world cup which can serve as a model (for best practice) to other countries planning to host such large events.

3.2. Project goal and objective

The goal of this project is to showcase best practice carbon offset energy efficient projects in order to promote and build awareness of renewable energy, its application on eco-friendly technologies and increase its use globally. This goal will be achieved when host city municipalities significantly increase the number of solar powered and low energy (energy efficient) public street and traffic lights beyond the areas affected by the 2010 to other public areas, including schools, hospitals, and police stations, commercial and residential streets, which will provide long-term savings and reduce the cost of maintenance. The benefits to the public will be indicated by the increase in their adoption of energy efficient technologies and appliances in place of technologies and appliances that consume conventional fossil powered energy.

3.2. The project will, through reduced greenhouse gas emissions, demonstrate the emission mitigating potential of efficient public appliances and the role of renewable energy, and to popularise these approaches with decision-makers and the general public involved in the 2010 FIFA World Cup event in South Africa with a focus on demonstration for future major sporting events, promoting environmental awareness and respect for the environment among the public through the utilisation of the popularity of sports; and promoting the implementation and development of environmentally friendly major sports events-related goods. Furthermore, as host cities are responsible for establishing a greening strategy and action plans in order to enable the implementation of minimum environmental standards, coordinating key role players at host city level, to

ensure the implementation of the action plans, and supporting the operator of the stadium with the implementation of greening activities

- 3.3.** This project has three main outcomes that it will demonstrate through the implementation of energy efficient technologies and practices in six host cities that will host 2010 FIFA World Cup matches.

3.4. Project components and expected results

Although all of the six host cities have completed their greening plans, the baseline information provided on energy consumption and reduction were not as comprehensive as they could have been; therefore reducing the level of detail and accuracy of these host city greening plans. All of the hosting cities have identified, as in line with the National Greening Programme, the importance of ensuring that this World Cup is carbon neutral by identifying energy reduction as one of the key environmental issues to be addressed in the construction of stadia, and during the football tournament itself.

This component will be implemented in six host city municipalities which will entail the appointment of an Energy Efficient (EE) consultant or company that will be responsible for the overall oversight management and implementation of activities identified under this component which includes, the installation and or retrofitting of solar panels technologies on public street and traffic lights near and around the stadia, and major intersections, as well as on billboards near the airports and stadia, in the six (6) host cities. The consultant/company will among other tasks, prior to implementation, study the host city Greening Plans, acquire progress reports from the cities on implementation in order to prepare a roll out plan and realistic budget for each host city. In addition, the consultant will develop terms of reference to be used in appointing EE service providers in the six host cities. Further, the consultant in line with UNEP/GEF reporting requirements, will oversee regular submission of progress report from EE sub-contractors to the PMU. It is also expected that the data on energy usage prior to the retrofit will be collected as baseline data and monitored once the energy efficient technologies are implemented to measure savings.

Output 1: Demonstration of green technologies, in the areas of solar and energy efficiency by the end of the World Cup.

Activity 1: This component will entail the appointment of a consultant(s)/company who will oversee the installation/retrofit of the energy efficient technologies at public street lights, traffic junctions and billboards at the port of entry leading up to the stadia, key traffic junctions of the stadia and strategic billboards at airports where international and domestic visitors travel through to watch games, respectively. A key component of the installation/retrofit will include the undertaking of the collation of data on baseline energy consumption prior to the installation/retrofit and calculate savings post the installation/retrofit. It is estimated that each host city will have at least 100 public street lighting installed/retrofitted, about 60 retrofitted traffic lights and 2 energy efficient billboards, one at the airport and stadia.

- 3.4.1** Globally, environmental issues that may have been taken for granted in the past have now become major concerns, and the public is beginning to appreciate the impact of these challenges on their quality of life. Several of these issues, including carbon emissions relating to air travel - Environmental Affairs Minister Buyelwa Sonjica told Parliament on 25 November 2009 that a feasibility study has shown the event will generate about 2.8-million tons of carbon emissions, almost 10 times the amount produced during the German World Cup in 2006. International air travel will account for 67% of the carbon footprint, according to the study which was commissioned by the Department of Environmental Affairs and the Norwegian government - and public transport, energy, waste management, and enhanced environmental performance of the new stadium and hospitality accommodation establishments, have attracted media coverage, and have helped to raise large-scale public awareness on these issues.

The high level objective of the **2010 Green Passport Initiative** is designed to encourage visitors to make long-term behavioural change – through the provision of easy to implement practical advice and tips – ‘green’ changes whilst they are attending the FIFA 2010 World Cup in South Africa. The overall objective being for

the visitors to experience and see that their behavioural change doesn't negate their experience and enjoyment of major sporting events, and therefore taking that behaviour back to their home countries.

By focusing on visitors, the programme will strengthen participation in a sporting event, and build on good behaviour practices for future events. These activities will promote responsible behaviour which can be taken away from the event and be replicated globally. Further, the incrementality of the 2010 Green Passport Initiative will be tied into and attained through DEA's National Greening Initiative and the individual Host City Green 2010 Action Plans, which are currently being implemented by all nine host cities.

Output 2: Green tourism initiative which will build on the existing UNEP's Green Passport initiative, will be adopted for promotion by six (6) host cities by the end of the World Cup.

- a) **Activity 2.1** This activity will entail the activation of the 2010 Green Passport Initiative. The 2010 Green Passport Initiative will be designed as an A3 foldable pocket size flyer which will be packed with information guiding 2010 visitors on how to promote responsible tourism during major sporting events. The intention is to provide useful information that is categorized for the visitor to use as a reference on a daily basis during the 2010 FIFA World Cup. This element will be activated through the production and distribution of a physical pocket-sized **2010 Green Passport** that will primarily contain – but not limited to – the following elements:

- Tips on how to be a Responsible Tourist, i.e. code of good conduct.
- Greening Programmes of the six Host Cities
- Provincial Map & Access Maps for the Stadia
- The Green Outdoor Experience (nature reserves, parks, gardens, natural history venues/places, etc)
- Green Accommodation (B&B's, hotels, hostels, eco-lodges, etc)
- Sustainable Eateries
- Tour routes (cradle of Human Kind hiking, mountain biking, whale-watching, etc)
- Avi-tourism or birding routes, etc
- Local Arts & Crafts Sector – Sustainable products where & what to buy,
- Online Resources (useful websites, etc)
- Emergency Services Contacts, National, Provincial & Host City,
- Where to Shop (malls, boutiques, etc)
- Night life Entertainment
- Safe local transport
- Places of Interest (museums, local nature parks, places of cultural village experiences, etc)
- What to do with the kids!
- Sporting Events Calendar per week with start & broadcast times (football)
- Safety & Security (local numbers, addresses, etc)
- Responsible Tourism & Low Carbon travel for Major Sporting Events: Act Locally, think Global

The channels of dissemination and distribution of the 2010 Green Passport will be through the Host City tourism offices, hospitality industry partners, lodges and B&B associations, tour operators and participating website partners (SA Tourism, UNEP, Host cities visitor information centres, DEA, Department of Tourism, etc).

3.4.2. Studies undertaken by the Tourism Grading Council indicate that a small proportion (less than 500) of tourism enterprises in South Africa are currently certified by responsible tourism schemes, compared to 8 457 in the country that have a star rating from the Tourism Grading Council. Although the low level of uptake by tourism enterprises in South Africa is not unusual when compared to global experience, it is an indication that responsible tourism certification is not yet mainstreamed in South Africa. It is also noted that half of these certified tourism products in South Africa are accredited by more than one scheme, and more than half are considering accreditation by a further scheme, indicating that schemes are not comprehensive across environmental, social and economic criteria. The Department of Tourism is in the process to formalize national minimum standards for responsible tourism, which are expected to be published by the end of November 2009.

Activity 2.2 : This activity will link in with the National Minimum Standards for Responsible Tourism (NMSRT), which aims to establish a national accreditation system for the tourism/hospitality sector. The Department of Tourism is in the process of finalizing the national accreditation standards for environmental certification schemes, following the emergence of a number of certification schemes with no unified standard. As the Department is still finalizing these standards, detailed activities will be identified following the gazetting of these standards in November 2009. Final activities will be discussed during the inception workshop. This activity is designed to provide information materials showing the hospitality industry how to implement simple changes to manage and reduce their consumption of energy, water and waste. Hotels and accommodation facilities use a lot of energy in their daily operations and recreational activities. With the escalating debate around climate change being crystallized in the forefront of public debate as COP 15 approaches, it has now become more important than ever, that the hospitality industry understand the key environmental issues and take action to reduce their carbon foot print.

3.4.3. As a developing country, South Africa faces serious environmental challenges associated with its rapidly growing, population and limited experience in environmental solutions. Yet, the environmental commitments made by the country in their bid documents to host a carbon neutral Soccer World Cup and investments relating to the infrastructure developed requires a review of what kind of legacy has been left by the 2010 FIFA World Cup in host cities specifically, and the country, the African continent, and the world in general. One of the key legacy opportunities presented by the 2010 FIFA World Cup™ is the platform that the event provides to leverage international and local media attention, which will in turn lead to behavioural change in favour of the environment. This will have the long-term benefit of reducing the consumption of scarce resources, such as water, energy and biodiversity, as well as reducing the amount of waste to- landfill. An independent assessment will be commissioned to review the implementation of the DEA's national greening programme, six host city Green Goal plans, and the LOC's Green Goal during the 2010 FIFA World Cup.

3.4.4. All communication and information material produced will highlight GEF and UNEP support to these activities.

Output 3: Using sports events to change practices and behaviour demonstrated, and a set of practices and best practice for future sporting events developed.

Activity 3.1 This activity seeks to collate and formalize the experiences and lessons learned during the 2010 FIFA World Cup. The activity will entail the review of how key environmental issues have been addressed against the original environment commitments as presented in the South African Bid document to FIFA. The host city's green goal effort will also be assessed to ascertain how environmental/greening solutions were delivered and to what extent they have been implemented. The role of the LOC will also be assessed in relation

to the implementation of the 2010 FIFA Green Goal programme. A critical analysis of greening projects will be carried out to identify what has worked and what were the challenges and their causes. The assessment report will in addition, address key greening achievements and highlight the missed opportunities which will constitute a lessons learned report. A set of guideline and practices will be developed for dissemination as well as posted on relevant websites and use future major events.

3.5. Intervention logic and key assumptions

The hosting of a carbon-neutral event in a developing country such as South Africa is a daunting and expensive undertaking. The lack of public transport infrastructure and renewable energy contributes to a significant increase in the carbon footprint compared to events in countries where this infrastructure is in place. In addition, South Africa is a long-haul destination, and international air travel increases the event's carbon footprint. Visitors expected stay in rented accommodation is also projected to be longer, thereby further increasing the carbon footprint. The assumption is that host cities are keen to participate in this project aimed at showcasing what they are doing to green the event and reduce carbon emissions. It is also assumed that the LOC environment unit will be interested in to link some of their Green Goal activities to the project.

3.6. Risk analysis and risk management measures

RISKS	LIKELIHOOD	REMEDIAL ACTIONS
1. Build-up to the 2010 World Cup has not prioritised the environmental components, from planning to actual implementation of strategies	Medium	The PMU in partnership with DEA will design a strategy that will assist the host cities in completing their environmental planning and assisting them with resource mobilisation for implementation.
2. Some of the smaller host city municipalities as well as the Local Organising Committee (LOC) have limited capacity to implement the greening 2010 action plans.	Medium	DEA has developed a process that will assist the host city municipalities identify and build capacity to implement their 2010 greening action plans.
3. Host city municipalities may lack the technical capacity to implement and manage the renewable energy interventions.	Medium	The CEF, as part of the roll-out strategy of the renewable energy interventions, will build in a process of capacity development and sustainable maintenance plans at the targeted host cities for the renewable energy interventions
4. Private sector participation with the outreach and communications strategy for the efficient and renewable energy interventions may require additional efforts as the private sector has shown reluctance to participate.	Low	The outreach and communications strategy, being implemented by the PMU for this project has to be designed in such a manner that it highlights the upside for private sector participation. Needs to demonstrate that such participation has high value publicity and through public perceptions of being associated with sustainable actions to mitigate climate change through the implementation of efficient and renewable energy strategies.
5. The global economic down-turn may inadvertently discourage host city municipalities from building on critical capacity within their environmental services departments, as a cost saving measure.	Medium	It is recommended that the project design makes specific reference to scenarios that limit the impact of a down-turn in the economy on the project.

3.7. Consistency With National Priorities Or Plans

3.7.1. National Strategic Targets: This South African Energy Efficiency Strategy of 2005 provides for the implementation of sector programmes in a three-phase approach, timed as follows:

- Phase 1: March 2005 to February 2008;
- Phase 2: March 2008 to February 2011;
- Phase 3: March 2011 to February 2015.

3.7.2. The broad principle of this phased approach is to initiate actions with rapid returns during the early phases. However, it is likely that interventions such as technical standards will also be addressed at an early stage to enable the long-term benefits to be maximised. Thus, this Strategy culminates in proposing the following energy efficiency target for South Africa:

❖ *A Final Energy Demand Reduction of 12% by 2015*

3.7.3. The target stated above is expressed as a percentage reduction against the projected national energy usage in 2015. The target will be monitored continuously for progress, using a monitoring system and an annual report will be issued. The projected usage is forecast at the present increase in economic development over the period and without any additional efficiency interventions. The forecast is derived from the Long range Energy Alternatives Planning tool (LEAP) utilised for developing the National Integrated Energy Plan for South Africa. The baseline scenario is similar to the base case scenario of the IEP ('business-as-usual') in which the following assumptions are made:

- Population growth: 2000=44 million, 2015=53,3 million (1,3% per annum)
- GDP growth: 2,8% average per annum growth over period
- Economic growth: 2,8% over the period
- Fuel switching limited apart from general increase in electricity consumption in the residential sector.

3.7.4. The national target is illustrated further in Figure 6, where final energy demand is shown as a total of all sectors and is expressed in Petajoules. The *Projected Demand to 2015* is as forecast at an annual growth rate of 2, 8% per annum. The *Target Outcome to 2015* is shown assuming that the national target is achieved, and that savings are implemented uniformly across the three phases of the Strategy. In actuality it is likely that savings will begin to materialise towards the latter stages of Phase 1 and into Phase 2.

3.7.5. The national target is calculated using the individual targets for each economic sector, and by weighting these according to the sectoral contribution to final demand, this national target was calculated through the assistance of a great deal of research which was undertaken prior to deriving the specific targets for each economic sector. The Department of (Minerals) and Energy (DME) commissioned detailed research projects to assess the baseline scenario of energy usage in South Africa, together with modelling the outcomes of technical efficiency interventions across the full range of sub-sectors.

3.7.6. The emphasis of the DME research projects has been upon technical interventions alone, and the assumptions made in arriving at sectoral targets are considered to be conservative. Additionally, and of equal importance, are the non-technical opportunities for energy savings which exist within most sectors, in particular the buildings, industry and mining sectors. Such opportunities can be broadly defined as *Energy Management Best Practice*, and by inference tend to revolve around "soft" issues such as behavioural change arising from increased awareness, training, accountability and information systems.

- 3.7.7.** The importance of effective Energy Management has been demonstrated time-and-again, both in South Africa and abroad, and numerous case studies bear testament to this fact. This Strategy recognizes that Energy Management Best Practice will play a vital role in achieving the national target. DME has commenced an initiative to develop and roll-out an Energy Management training and awareness programme to be implemented within the industry and mining sectors.
- 3.7.8. Review of Strategic Targets:** A review of the national and sectoral targets will be undertaken at the end of each phase. This review will be carried out by the DME with the objective of assessing progress towards targeted outcomes and to address any areas where additional input may be required from stakeholders.
- 3.7.9.** It is important that the targets are seen to be both *challenging* and *achievable*. In most cases the sectoral targets comprise a conservative estimate of the likely impact of technical interventions, coupled with the additional impact of Energy Management initiatives and behavioural changes.
- 3.7.10. Outcomes of the Energy Efficiency Strategy-** The table below summarises outcomes by the eight goal areas of the Strategy, assuming that all targets are met. The goals are largely an expression of the objectives of the *White Paper on Energy Policy* which represent Government's commitment on a number of socioeconomic aims. It should be noted that not all goal outcomes are quantifiable at this stage, so qualitative commentary is provided against some outcomes. In addition, outcomes such as job creation, energy poverty alleviation and improved industrial competitiveness are factually substantiated by international experience and studies, although no local investigations have been done in South Africa yet.

Projected Outcomes of the South Africa Energy Efficiency Strategy by 2015	
Goal Area	Outcomes
Goal 1 Improve the health of the nation	<ul style="list-style-type: none"> Health benefits realised through reduced atmospheric pollution and improved living conditions, in particular a reduction in respiratory-related illnesses
Goal 2 Creation of Jobs	<ul style="list-style-type: none"> Long-term employment opportunities increased by reducing costs in commerce and industry; Employment opportunities increased within the energy efficiency sector and related activities.
Goal 3 Energy Poverty Alleviation	<ul style="list-style-type: none"> Access to affordable energy services improved by promoting low energy alternatives in the marketplace; Lower energy costs for households by improving domestic energy efficiency.
Goal 4 Reduce local Pollution	<ul style="list-style-type: none"> Atmospheric pollutant levels reduced by a reduction in fossil fuel combustion at power stations; Local atmospheric pollutant levels reduced by a reduction in fossil fuel combustion within industry and commerce; Transport-related atmospheric pollutant levels reduced by a reduction in combustion of petroleum products in motor vehicles.

Goal 5 Reduce CO2 Emissions	<ul style="list-style-type: none"> National CO2 emissions reduced by improving energy efficiency across all economic sectors;
Goal 6 Improve Industrial Competitiveness	<ul style="list-style-type: none"> Improved industrial and commercial profitability by controlling and minimising energy overheads; Improved international acceptability of South African products by minimising the environmental impacts of their manufacture.
Goal 7 Increase Energy Security	<ul style="list-style-type: none"> Increased national resilience against oil price fluctuations by reducing the country's dependence upon imported crude oil supplies; Increased resilience against internal supply disruptions by reducing load demands placed upon power distribution systems.
Goal 8 Defer Additional Generation Capacity	<ul style="list-style-type: none"> Construction of additional power generation plant deferred as far as practicable by contributing towards Eskom's peak load reduction target.

3.8. Incremental cost reasoning

The Government of South Africa through its various departments, host city municipalities have committed significant resources to the 2010 FIFA World Cup™. These investments are assumed to provide national benefits.

3.9. Sustainability

The National Department of Environmental Affairs has embarked on the Legacy programme post hosting of the 2010 FIFA World Cup. A national brand for the National Greening Programme is in place and has been registered with the National Department of Trade and Industry. Furthermore, the department is in the process of appointing a consultant to develop the National Greening Framework document, Communication Strategy and Guideline for the use of the national greening brand. This initiative has been informed by the 2010 greening programme.

3.10. Replication

Once the National Greening Programme is in place post 2010, it will also require of other spheres of government to plan and implement their own greening programmes. In addition the National Department of Economic Development has a strategic focus on green jobs for the country, which is currently at preliminary planning stages.

3.11. Public awareness, communications and mainstreaming strategy

3.11.1. Information and general awareness are key elements to achieve success in terms of changing South Africa into a more energy efficient society. Once laws and regulations are established, architects will need guidance (from standards, codes of practice, etc.) on how to design houses according to the new regulations, and plumbers should also be informed about the need to insulate geysers.

3.11.2. Awareness-raising starts with pre-schooling education and runs through all learning fields into the adult education system, under the auspices of the National Qualification Framework (NQF) up to level 8. The DME will engage with

the institutions responsible for education and support, and facilitate the inclusion of appropriate education on energy efficiency in the curriculum.

3.12. Environmental and social safeguard

- 3.13.** The South African government is committed to making the 2010 FIFA World Cup™ event environmentally and socially sustainable, and as such, has put measures in place to ensure that this is indeed a green and carbon neutral event. They include the development of host city greening plans which is a valuable tool to ensure the host cities deliver a lasting legacy to the citizens of and visitors during the 2010 FIFA World Cup™, through promoting sustainable lifestyles and delivering programmes, projects and products that enhance the sustain the environment. In line with the DEA's Greening objective, host city greening programme will contribute to raising awareness, minimizing waste, diversifying and using energy efficiently, consuming water sparingly, compensating for the event's carbon footprint, practicing responsible tourism, and constructing infrastructure with future generations in mind. These greening initiatives will look beyond the actual time frame of the 2010 FIFA World Cup™, and include concerns for post event environmental, social and economic impacts on the immediate and extended environment. Host Cities are not only committed to being environmentally responsible, but must ensure that social concerns are addressed at the same time, and that the Green Goal 2010 programme leaves a positive legacy for all the people of this region.

SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

- 4.1** An organizational chart has been prepared (see Appendix 9), which shows both the hierarchy and the communication flow amongst all partners in order to ensure a smooth implementation of the project. UNEP/GEF will act as the Implementing Agency, and the Department of Environmental Affairs (DEA) will be the lead Executing Agency. In addition, a project steering committee is foreseen in order to provide guidance and ensure a coordination of activities.
- 4.1.2.** A Project Management Unit (PMU) will be established consisting of the Project Coordinator and an Administrator. The Project Coordinator will be responsible for the day-to-day project operations, financial accounts, periodic reporting to UNEP and for allocation of the GEF grant according to the quarterly work plans and budgets in coordination with UNEP. The Project Coordinator will be the primary contact person for the Project for external communication and will act as the convener for meetings between the DEA and UNEP. The project will contract one full-time Project Coordinator; GEF budget for this position is available only for 18 month period. A full-time Administrator will be contracted with GEF budget during the same period.
- 4.1.3.** While the PMU will be dedicated to planning, supervision and administrative tasks, the Project Working Group (PWG) will work in-depth on the technical issues addressed by the PMU will establish an internal PWG and assign one professional with experience in EE to this group who will be dedicated to the Project for a period on 40 weeks. The EE specialist will also provide oversight and support to ensure the smooth roll out of the implementation of the retrofitting of energy efficient technologies in the six (6) host cities.
- 4.1.4** A Project Steering Committee (PSC) together with the Project Coordinator, Administrator and Technical Project Leader. The PSC will meet quarterly to review progress and obstacles and to decide upon strategic or critical issues. The PSC is the highest decision-making authority of this project. The PSC meetings will be called by the Project Coordinator and extraordinary meetings will be held if deemed necessary by one of the PSC members, who are constituted by representatives from UNEP/GEF, LOC, Department of Tourism, representatives from the six host cities, to name a few. If appropriate, the PSC can invite external consultants to assist in the monitoring process.

SECTION 5: STAKEHOLDER PARTICIPATION

- 5.1** Hosting a green event provides key stakeholders an opportunity for cooperation will be sought with a number of government departments, government agencies the local organizing committee, and the host cities. The primary

beneficiaries of this intervention are the six host city municipalities, who through the development and improvement of infrastructure in their jurisdiction are the recipients of the improved facilities that will have a long term sustained legacy. The outcome of the project will provide significant lessons to other municipalities who can draw lessons from hosting such events.

ROLE-NAME OF INSTITUTION	MAIN INTEREST	SPECIFIC INTEREST IN THE PROJECT
UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)	UNEP is the voice for environment within the United Nations system, and is an advocate, educator, catalyst and facilitator by promoting wise use the planet's natural assets for sustainable development.	Provides the financial resources to ensure that the Greening 2010 Framework and Green Goal 2010 are implemented.
DEPARTMENT OF ENVIRONMENTAL AFFAIRS (DEA)	DEA is the primary custodian of for the protection, conservation and enhancement of the environment in South Africa.	The department is responsible for facilitation, coordination and support the greening of the 2010 FIFA World Cup™, which is undertaken within the scope and parameters of FIFA. This will entail the incorporation of sustainable development principles into the planning, execution, reporting and monitoring of the event outcome and ensuring that the 2010 is a carbon neutral tournament by monitoring the implementation of programmes that reduce carbon emissions
DEPARTMENT OF ENERGY (DE)	DE is the lead department for the Energy Efficiency and Renewable energy component of the greening the 2010 FIFA World Cup™. The department will assist in gathering information of performance in energy efficiency targets, monitoring, evaluating and reporting on the Green Goal and Greening 2010 tournament.	Ensuring that targets set for energy efficiency are achieved by host cities during the tournament, ensuring that lessons learned during 2010 FIFA World Cup™ translate into the programme, and assist in reporting on the outcomes of the energy efficiency component of the 2010.
LOCAL ORGANIZING COMMITTEE	Assists stakeholders in understanding FIFA rules and regulations in relation to sponsorship, greening and infrastructure development. Develop awareness and communication campaigns about	Ensure that all host cities and their service providers operate within an agreed greening framework. Ensure that the greening programme leaves a lasting legacy. Educate the public and tourists on climate change and what they can do to contribute in reducing the carbon emission during the tournament.
HOST CITIES	Host Cities have the ultimate responsibility for hosting a Green 2010 FIFA World Cup™.	Host cities need to ensure that all greening aspects are undertaken, which include but not limited to; making provision for the required resources (i.e. financial, human, infrastructure etc, implementing greening aspects of 2010, ensure that 2010 Greening targets are reported and monitored throughout the tournament; report on the success and or challenges of the greening objectives, conceptualize, implement and manage greening legacy projects, conduct environmental awareness campaigns for the benefit of communities, visitors, and officials throughout the municipality, and roll out best practice models of greening initiatives.
NATIONAL ENERGY EFFICIENCY (NEEA)	ENERGY AGENCY NEEA is a division of the Central Energy Fund (CEF) ⁸ whose mandate is to oversee the implementation of the Demand-Side Management (DSM) and energy efficient projects undertaken by Eskom and other entities in the country. CEF is incorporated in terms of the Central Energy Fund Act, and is mandated by the South African	Will oversee the implementation of demand-side management (DSM) and energy efficient project undertaken by Eskom and other entities in the country.

⁸ The Central Energy Fund (CEF) is a parastatal organization is incorporated in terms of the Central Energy Fund Act, and is mandated by the South African government to engage in the acquisition, exploration, generation, marketing and distribution of any energy form and to engage in research relating to the energy sector.

	government to engage in the acquisition, exploration, generation, marketing and distribution of any energy form and to engage in research relating to the energy sector.	
ESKOM	National utility providing electricity generating approximately 95% of the electricity in South Africa. Assist in developing energy guidelines and skills transfer.	Eskom is concentrating its efforts on a combination of existing and new 2010 specific initiatives to improve the national power supply and capacity and the efficient use of energy during the World Cup. Will provide some of the information on the utilization of electricity during the tournament, and contribute in compiling the green report. Eskom will incorporate lessons learnt into the South African responsible electricity use
TOURISM GRADING COUNCIL OF SOUTH AFRICA (TGCSA)	TGCSA's national mandate is to provide a framework and process for grading all relevant sectors of the tourism industry.	Integrate environmental aspects into grading requirements and accreditation of the hospitality industry. Obtain resource use information from the hospitality industry.
TOURISM BUSINESS COUNCIL OF SOUTH AFRICA	TBCSA is the voice of the business sector involved in tourism industry and its primary role is to engage with all stakeholders in developing macro strategies that create an enabling environment for tourism development.	Identify avenues to integrate environmental awareness into tourism marketing, conduct tourism satisfaction surveys that incorporate environmental dimensions.

SECTION 6: MONITORING AND EVALUATION PLAN

- 6.1.1.** The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 8 Reporting requirements and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.
- 6.1.2.** The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 4 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverable and benchmarks included in Appendix 6 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarized in Appendix 7. Other M&E related costs are also presented in the Costed M&E Plan and are fully integrated in the overall project budget.
- 6.1.3.** The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.
- 6.1.4.** The project Steering Committee will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.
- 6.1.5** Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without

neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

- 6.1.6** A mid-term management review or evaluation will take place on September 2010 as indicated in the project milestones. The review will include all parameters recommended by the GEF Evaluation Office for terminal evaluations and will verify information gathered through the GEF tracking tools, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis (see section 5 of the project document). The project Steering Committee will participate in the mid-term review and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented.
- 6.1.8.** An independent terminal evaluation will take place at the end of project implementation. The Evaluation and Oversight Unit (EOU) of UNEP will manage the terminal evaluation process. A review of the quality of the evaluation report will be done by EOU and submitted along with the report to the GEF Evaluation Office not later than 6 months after the completion of the evaluation. The standard terms of reference for the terminal evaluation are included in Appendix 9. These will be adjusted to the special needs of the project.
- 6.1.9.** The GEF tracking tools are attached as Appendix 15. These will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above the mid-term and terminal evaluation will verify the information of the tracking tool.

SECTION 7: PROJECT FINANCING AND BUDGET

7.1. Overall project budget

Attached as Appendix 1

7. Project co-financing

Name of Co-financier (Source)	Classification	Type	Project Preparation*	Project	Total	%
1.DEA	National Treasury	GRANT	-	8,613,411	\$8,613,411	1 100%
TOTAL				US\$ 8,613,411	US\$ 8,613,411*	

7.3 Project cost-effectiveness

All three outcomes of the project will ensure cost effectiveness of the project. Outcome1 ensures cost effectiveness as GEF funded activities under this outcome will be focusing on the integration of greenhouse emissions mitigation initiatives are complementary to the host city infrastructure plans for the 2010 FIFA World Cup™. Outcome 2 will ensure cost effectiveness by linking and utilizing the national minimum standards for responsible tourism, to reduce the energy consumed by the hospitality industry, raise awareness on the impact of climate change large sporting events, and activate the UNEP's Green Passport to increase awareness in participating countries, fans and visitors. Outcome 3, GEF funding will be utilized to document lessons learned on monitoring and evaluating the implementation of the Green Goal and National Greening programmes and produce six host city greening legacy report.

APPENDIX 1 - RECONCILIATION BETWEEN GEF ACTIVITY BASED BUDGET AND UNEP BUDGET LINE (GEF FUNDS ONLY US\$)

[illegible]

Appendix 3: Incremental cost analysis

OUTCOME/BENEFIT	BASELINE	ALTERNATIVE	INCREMENT
OUTCOME 1: Energy consumption for advertising and other sports relate energy consumption around 6 stadia down by 15% of baseline estimates, and use of renewable energy as an alternative source to electricity	Documented energy consumption and savings reports (baseline) as a result of solar panel fitted on street, and traffic lights and billboards, are not in place for the six host cities. Demonstration projects by the Central Energy Fund(CEF) on retrofitting solar powered street lighting, traffic lights and bill boards have only been implemented in Cape Town and Gauteng Province	Implementation of the energy efficient technologies reduces the carbon emission and consumption of energy in host cities during the FIFA 2010 tournament. Costs: US\$ 600.000 (GEF) Costs: US\$ 3,359,998 (DANIDA grant)	The six host city municipalities have gained the benefits of energy efficient technologies and are replicating the project in other areas of their jurisdiction. Other municipalities adopting EE technologies to reduce carbon emission and provide public lighting services at reduced cost their localities, i.e. national roll out of EE technologies. Incremental Costs: US\$ 600.000 (GEF) Costs: US\$ 3,359,998 (DANIDA grant)
OUTCOME 2: 30% of spectators in six host cities adopt UNEP's green passport objectives as part of their participation during the World Cup	None of the six targeted host cities has included the development of a 2010 green passport initiative in their greening plans,	Assist the six targeted host cities to design and implement a programme a 2010 Green Passport initiative (in partnership with the tourism and hospitality associations) that will provide information to visitors to the 2010 World Cup which will encourage them to act in an environmentally responsible manner, and then take that behavioural change out of South Africa to their home countries and practice that change. Further, as these sports visitors attend other international sporting events, such as the Olympic games, Football, rugby and cricket World Cups, they will subconsciously behave in an environmentally responsible manner. collate the effectiveness of the Green Passport Initiative	Globally, the data captured on statistics relating to the Green Passport Initiative will be collated, packaged and disseminated through the UN's Resident Co-ordination function in 146 countries (where the UN has resident Co-ordinators) as a practical example of responsible tourism, particularly at major sporting events. At a local level, DEA will disseminate the data and statistics to other government departments, provincial governments and municipalities on responsible tourism behaviour at major sporting events,
OUTCOME 2.1: To ensure integration of and awareness of Green Goal practices of FIFA 2010	Limited programmes preparing the hospitality industry in reducing its contribution to the carbon footprint generated in the hospitality sector during major sporting events	This activity is designed to provide information materials showing the hospitality industry how to implement simple changes to manage and reduce their consumption of energy, water and waste during the FIFA 2010 World Cup.)	Global hotel and hospitality chains operating in South Africa, can draw practical lessons from acting environmentally (and thus making significant cost savings in the medium to long run) responsibility as to the type of services they offer guests, whilst at the same time reducing their carbon footprints and illustrating to their global travellers how operating in such a manner will not negate there comfort or quality of their stay. action and

<p>OUTCOME 3:</p> <p>Independent assessment through the measuring of carbon emissions reduction results.</p> <p>.</p>	<p>Plans and budgets not all in place for undertaking a comprehensive independent assessment of the environmental commitments at the six targeted host cities.</p> <p>)</p>	<p>Provide assistance to the DEA in collaborating with the six host cities in commissioning a comprehensive assessment of the effectiveness of the National Greening Programme, the FIFA 2010 Green Goal Initiative and the six host city's Greening Plans.</p>	<p>The assessment will produce guidelines and practices for 'greening' future large scale sporting events globally.</p>
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Appendix 4: Project Results Framework

Attached as Annex A in CEO Endorsement template

Appendix 5: Work plan and Timetable

[illegible]

[illegible]

APPENDIX 6: KEY DELIVERABLES AND BENCHMARKS

Key deliverables and benchmarks were discussed and agreed upon as a draft between project partners during project preparation. They will be confirmed during the inception phase of the project.

Appendix 7 : Independent Assessment Work Plan and Corresponding Budget

Type of Assessment Activity	Responsible Party	Budget (excluding project team staff time)	Time Frames
Inception Workshop	PMU UNEP-GEF	5,000	Within first two months of project start up
Inception Report	PMU	0	Immediately following IW
APR/PIR	PMU UNEP-GEF	0	Annual
Steering Committee Meetings	Project Manager UNEP-GEF	3,000	Following Project IW and subsequently at least quarterly
Quarterly Progress Reports	PMU	0	To be determined by PMU
Review of environmental commitments in SA FIFA bid and LOC Green Goal implementation.	PMU External Consultants,	30,000	March 2010
Assessment of the six Host City Green Goal Plans	PMU External Consultants, i.e. evaluation team	40,000	April 2010
Lessons Learned	PMU UNEP-GEF	25,000	August 2010
Development of a set of guidelines and practices during major sporting events(FIFA 2010)	PMU UNEP-GEF	25,000	Oct-Nov 2010
Dissemination of best practice report	PMU UNEP-GEF	22,000	January 2011
Total Indicative Costs		US\$150,000	

Appendix 8: Summary of reporting requirements and responsibilities

Type of Report	Due date	Format appended to legal instrument	Responsibility of
Procurement Plan	Two weeks before inception meeting	N/A	Project Manager
Inception Report	One month after inception workshop	N/A	Project Manager
Expenditure report accompanied Yearly or before 30 June by explanatory notes	Quarterly on or before 30 April, 31 July, 31 October, 31 January	Annex 11	Project Manager
Cash advance request and details of anticipated disbursement	Quarterly or when required	Annex 7B	Project Manager
Progress Report	Half –yearly or when required	Annex 8	Project Manager
Audited report for expenditure for the year ending 31 December	Yearly, on or before 30 June	N/A	Executing partner to contract firm
Inventory of non-expandable equipment	Yearly, on or before 31 January		Project Manager
Co-financing report	Yearly except Year one, on or before 31 August		Project Manager
Project implementation review (PIR) report	Yearly or as relevant	N/A	Project Manager UNEP/GEF
Mission report ' <i>aide memoire</i> ' for executing agency	Within two weeks of return	N/A	UNEP/GEF
Final report	Two months of project completion date	Annex 10	Project Manager
Final inventory of non-expandable equipment		Annex 9	Project manager
Equipment transfer letter		Annex 10	Project manager
Final expenditure statement	Three months of completion date	Annex 11	Project manager UNEP???
Midterm review or Midterm evaluation	Mid way through project	N/A	UNEP/GEF
Final Audited report	Six months of project completion date	N/A	Executing partner to contract firm
Independent terminal evaluation	Six months of project completion date	Appendix 9 and Annex 1	

Appendix 9: Standard Terminal Evaluation TOR

Objectives of the Scope of the Evaluation

The objective of this terminal evaluation is to examine the extent and magnitude of any project impacts to date and determine the likelihood of future impacts. The evaluation will also assess project performance and the implementation of planned project activities and planned outputs against actual results. The evaluation will focus on the following main questions:

1. Did the project help to reduce the carbon footprint during the 2010 FIFA World Cup™?
2. To what extent did the project outputs produced have the authority and credibility necessary to influence policy makers, private sector, host city municipalities and other key stakeholders?

Method

This terminal evaluation will be conducted as an in depth evaluation using a participatory approach whereby the UNEP/GEF Task Manager, key representatives of the executing agency, host city municipalities, other relevant staff are kept informed and consulted throughout the evaluation. The consultant will liaise with the UNEP/GEF Task Manager and DEA on any logistic and/or methodological issues to proper conduct the review in as independent a way as possible, given the circumstances and resources offered. The draft report will be circulated to UNEP/GEF Task Manager, key representatives of the executing agency, and the project steering committee. Any comments or responses to the draft report will sent to UNEP/GEF for collation and the consultant will be advised of any necessary or suggested revisions.

The findings of the evaluation will be on the following:

1. A desktop review of the project documents including but not limited to :
 - a) The project documents, outputs, monitoring report (such as financial reports to UNEP and GEF, annual Project Implementing Review report) and the relevant correspondence.
 - b) Notes from the Steering Committee meetings
 - c) Other project related materials produced by project staff
 - d) Relevant materials published on project website.
2. Interviews with project management and technical support (service providers contracted to deliver on the three key outputs)
3. Face to face interviews and telephonic interviews with host city municipalities, the LOC and key stakeholders involved with this project. The consultant shall determine whether to seek additional information and opinions from other departments and agencies. As appropriate these interviews could be combined with an email questionnaire.
4. Interviews with UNEP/GEF project Task Manager and Fund Management Officer, and other relevant staff in UNEP dealing with Climate Change related activities as necessary. The consultant shall also gain broader perspective from discussions with relevant GEF Secretariat staff.

5. Field visits to project staff

Key Evaluation Principles:

In attempting to evaluate any outcomes and impacts that the project may have achieved, evaluators should remember that the projects performance should be assessed by considering the difference between the answers to two simple questions: *'what happened?'* and *'what would have happened anyway?'*. These questions imply that there should be consideration of baseline conditions and trends in relation to the intended outcomes and impacts. In addition, it implies that there should be plausible evidence to attribute such outcomes and impacts to actions of the project.

Sometimes, adequate information on baseline conditions and trends is lacking. In such cases, this should be clearly highlighted by the evaluator, along with any simplifying assumptions that were taken to enable the evaluator to make judgements about project performance.

Project Ratings:

The success of the project implementation will be rated on a scale from '*highly unsatisfactory*' to '*highly satisfactory*'. In particular, the evaluation shall assess the rate the project with respect to the eleven categories as defined below;

- a) *Effectiveness*: Evaluate how, and to what extent, the stated project objectives have been achieved, taking into account the 'achievement indicators'. The analysis of outcomes achieved should include, *inter alia*, an assessment of the extent to which the project has directly or indirectly assisted policy and decision makers to apply information supplied by energy efficiency indicators in their national planning and decision making. In particular,
 - Evaluate the immediate impact of the project on climate change monitoring and in national planning and decision making and international understanding and use of energy efficient indicators
 - As far as possible, also assess the potential of long term impacts considering that the evaluation is taking place upon completion of the project and that longer term impact is expected to be seen in a few years time. Frame recommendations to enhance future project impact in this context. Identify which will be the major 'channels' for long-term impact from the project at national and international scales
- *Relevance*. In retrospect, were the project's outcomes consistent with the local areas/operational programme strategies? Ascertain the nature and significance of the contribution of the project outcome to the UNFCCC and Kyoto Protocol and the wider portfolio of the GEF.
- *Efficiency*; Was the project cost effective? Was the project the least cost option? Was the project implementation delayed and if it was then did that affect cost effectiveness? Assess the contribution of cash and in-kind co-financing to project implementation and to what extent the project leveraged additional resources. Did the project build on earlier initiatives, did it make use of available scientific and/or technical information. Wherever possible the evaluator should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects,
- b) *Sustainability*: Sustainability is understood as the probability of continued long-term project-derived outcomes and impacts after the GEF project funding ends. The evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits after the project ends. Some of these factors might be outcomes of the project, e.g. Stronger institutional capacities or better informed decision making. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes. The evaluation should ascertain to what extent follow-up work has been initiated and how project outcomes will be sustained and enhanced overtime.

Five aspects of sustainability should be addressed: financial, socio-political, institutional frameworks and governance, environmental (if applicable). The following questions provide guidance on the assessment of these aspects:

- *Financial Resources*: Are there any financial risks that may jeopardize sustenance of project outcomes? What is the likelihood that financial and economic resources will not be available once GEF assistance ends(resources can be from multiple sources, such as the public and private sectors income generating activities, and trends that may indicate that it is likely that in future there will be adequate financial resources for sustaining project's outcome)? To what extent are the outcomes of the project resources dependent on continued financial support?

- *Socio-political:* Are there any social or political risks that may jeopardize sustenance of project outcomes? What is the risk at the level of stakeholder ownership will be insufficient to allow for the project outcomes to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public /stakeholder awareness in support of the term objectives of the project?
- *Institutional framework and governance:* to what extent is the sustenance of the outcomes of the project dependent on issues relating to institutional frameworks and governance? What is the likelihood that institutional and technical achievements, legal frameworks, policies and governance structures and processes will allow for, the project outcomes/benefits to be sustained? While responding to these questions consider if the required system for accountability and transparency and the required technical know-how are in place.
- *Environmental:* Are there any environmental risks that can undermine the future flow of project environmental benefits? The consultant should assess whether certain activities in the project area will pose a threat to the sustainability of the project outcomes. For example, construction of a hydropower electrical station in a protected area, could

C. Achievement of outputs and activities

- Delivered outputs: assessment of the projects success in producing each of the programmed outputs, both in quantity and quality as well as usefulness and timelessness.
- Assess the soundness and effectiveness of the methodologies used for developing the technical documents and relating management options in participating countries.
- Assess to what extent the project outputs produced have the weight of scientific authority/credibility, necessary to influence the policy and decision makers, particularly at the national level.

D. Catalytic role

Replication and catalysis. What examples are there of replication and catalytic outcomes? Replication approach, in the context of GEF projects, is defined as lessons and experiences coming out of the project that are replicated or scaled up in the design and implementation of other projects. Replication can have two aspects, replication proper (lessons and experiences are replicated in different geographic area) or scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources). Specifically: do the recommendations for management of project coming from the country studies have the potential for application in other countries and locations?

If no effects are identified, the evaluation will describe the catalytic or replication actions that the project carried out.

E. Assessment monitoring and evaluation systems

The evaluation shall include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The Terminal Evaluation will assess whether the project met the minimal requirements for the project design of M&E and the application of the project M&E plan' (see minimal requirements 1&2 in Annex 4 to this appendix). GEF projects must budget adequately for the execution of the M&E plan, and provide adequate resources during implementation of the M&E plan. Project managers are also expected to use information generated by the M&E system during project implementation to adapt and improve the project.

M&E during project implementation

- *M&E design*: Projects should have sound M&E plans to monitor results and track progress towards achieving project objectives. An M&E plan should include a baseline (including data, methodology, etc), SMART indicators (see Annex 4) and data analysis systems, and evaluation studies at specific times to access results. The time frame for various M&E activities and standards for outputs should have been specified.
- *M&E plan implementation* :A terminal Evaluation should verify that; an M&E system was in place and facilitated timely by tracking of results and progress towards projects objectives throughout the project implementation period(perhaps through use of a log frame or similar) annual project reports and Progress Implementation Review(PIR) reports were complete, accurate and with well justified ratings; that the information provided by the M&E system was used during the project to project performance and to adapt to changing needs; and that projects had an M&E system in place with proper training for parties responsible for M&E activities.
- *Budgeting and Funding for M&E Activities*: The terminal evaluation should determine whether support for M&E was budgeted adequately and funded in a timely fashion during implementation

F. Preparation and Readiness:

Where the project's objectives and components are clear, practical and feasible within timeframe? Were the capacities of executing institution and counterparts properly considered when the project was designed? Were the lessons from other relevant projects properly incorporated in the project design? Were counterpart resources (funding, staffing and facilities), enabling legislation, and adequate project management arrangements in place?

g) This is the relevance of the project to national development and environmental agendas, recipient country commitment, and regional and international agreements, the evaluation will;

- Assess the level of country ownership. Specifically, the evaluator should assess whether the project was effective in providing and communicating carbon emission reduction information that catalyzed action in participating countries to improve decisions relating to the carbon emission reducing initiatives.
- Assess the level of country commitment to the generation and use of carbon emission indicators for decision making during and after the project, including in regional and international fora.

H. Stakeholder participation/ public awareness:

This consists of three related and often overlapping process; information dissemination, consultations, and 'stakeholder' participation. Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or stake in the outcome of the GEF –financed project. The term also applies to those potentially adversely affected by a project. The evaluation will specifically:

- Assess the mechanism put in place by the project for identification and engagement of stakeholders in each of the participating country and establish, in consultation with the stakeholders, whether this mechanism was successful, and identify its strengths and weaknesses.
- Assess the degree and effectiveness of collaboration/interactions between the various project partners and institutions during the course of implementation of the project.
- Assess the degree and effectiveness of any public awareness activities that were undertaken during the course of implementation of the project

I. Financial Planning:

Evaluation of financial planning requires assessment of the quality and effectiveness of financial planning and control of financial resources throughout the project's lifetime. Evaluation includes actual project costs by activities compared to budget (variances), financial management (including disbursement issues) and co-financing. The evaluation should:

- Assess the strength and utility of financial controls, including reporting, and planning to allow the project management to make informed decisions regarding the budget and allow for a proper and timely flow of funds for payment of satisfactory project deliverables.
- Present the major findings from the financial audit if one has been conducted
- Identify and verify the sources of co-financing as well as leveraged and associated financing (in co-operation with implementing agency and executing agency)
- Assess whether the project has applied appropriate standards of due diligence in management of funds and financial audits
- The evaluation should also include a breakdown of final actual costs and co-financing for the project prepared in consultation with the relevant UNEP/GEF fund management officer of the project(table attached in Annex 1 Co-financing and leveraged resources)

J. Implementation approach:

This includes an analysis of the projects management framework, adaptation to changing conditions (adaptive management), partnerships in implementation arrangements, changes in project design and overall project management. The evaluation will:

- Ascertain to what extent the project implementation mechanism outlined in the project document has been closely followed. In particular, assess the role of the various committees established and whether the project document was clear and realistic to enable effective and efficient implementation, whether the project was executed according to the plan and how well the management was able to adapt to changes during the life of the project to enable implementation of the project,
- Evaluate the effectiveness and efficiency and adaptability of project management and supervision of the activities/project execution arrangements at all levels (1) policy decisions; Steering Committee; (2) day to day project management in each of the country executing agency(DEA)

K. UNEP Supervision and Backstopping:

- Assess the effectiveness of supervision and administration and financial support provided by UNEP/GEF
- Identify administrative operational and /or technical problems and constraints that influenced the effective implementation of the project.

The *ratings will be presented in the form of a table*; each of the eleven categories should be rated separately with brief justifications based on the main analysis. An overall rating for the project should also be given. The following rating system is to be applied;

HS	= Highly Satisfactory
S	= Satisfactory
MS	= Moderately Satisfactory
MU	= Moderately Unsatisfactory

U = Unsatisfactory
HU = Highly Unsatisfactory

3. Evaluation report format and review procedures

The 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; indentify key concerns and present evidence- based findings, consequent conclusions, recommendations and lessons. The report should be presented in a way that makes the information accessible and comprehensible and include an executive summary that encapsulates the essence of the information contained in the report to facilitate the dissemination and distillation f lessons.

The evaluation will rate the overall implementation success of the project and provide individual ratings of the eleven implementation aspects as described in Section 1 of this TOR. ***The ratings will be presented in the format of a table*** with a brief justification based on the finding of the main analysis.

Evidence, findings, conclusions and recommendations should be presented in a complete and balanced manner. Any dissident views in response to evaluation findings will be appended in an annex. The evaluation report shall be written in English, be of no more than 50 pages(excluding annexes) use numbered paragraphs and include;

- i) An **executive summary** (no more than 3 pages) providing a brief overview of the main conclusions and recommendations of the evaluation;
- ii) **Introduction and background** giving a brief overview of the evaluated project, for example, the objectives and status of the activities; the GEF Monitoring and Evaluation Policy, 2006, requires that a TE report will provide summary information on when the evaluation took place, places visited , who was involved; the key questions ; and , the methodology.
- iii) **Scope, objectives and methods** presenting the evaluation’s purpose the evaluations criteria used and questions addressed;
- iv) **Project Performance and impact** providing *factual evidence* relevant to the questions asked by the evaluator and interpretation if such evidence. This is the main substantive section of the report. The evaluator should provide a commentary and analysis on all eleven evaluation aspects (A-K above).
- v) **Conclusions and ratings** of project implementation success giving the evaluator’s concluding assessments and ratings of the project against given evaluation criteria and standards of performance. The conclusions should provide answers to questions about whether the project is considered good or bad, and whether the results are considered positive or negative. The ratings should be provided with a brief narrative comment in a table (see Annex 1 to this Appendix)
- vi) **Lessons (to be) learned** presenting general conclusions from the standpoint of the design and implementation of the project, based on good practices and successes or problems and mistakes. Lessons should have the potential for wider application and use. All lessons should ‘stand alone’ and should;
 - Briefly describe the context from which they are derived
 - State or imply some prescriptive action
 - Specify the context in which they may be applied (if possible, who when, and where)
- v) **Recommendations** suggesting *actionable* proposals for improvement of the current. In general, Terminal Evaluation are likely to have very few (perhaps two or three) actionable recommendations.

Prior to each recommendation, the issue(s) or problem(s) to be addressed by the recommendation should be clearly stated.

A high quality recommendation is an actionable proposal that is:

1. Feasible to implement within the timeframe and resources available
2. Commensurate with the available capacities of project team and partners
3. Specific in terms of who would do what and when
4. Contains result based language (i.e. a measurable performance target)
5. Includes a trade-off analysis, when its implementation may require utilizing significant resources that would otherwise be used for other project purposes.

vii) **Annexes** may include additional material deemed relevant by the evaluator but must include:

- The evaluators Terms of Reference
- A list of interviews and evaluation timelines
- A list of documents reviewed/consulted
- Summary co-finance information and a statement of project expenditure by activity
- Expertise of the evaluation team (brief CV)

TE reports will also include any responses/comments from project management team and/or the country focal point regarding the evaluation findings or conclusions as an annex to the report, however, such will be appended to the report by UNEP EOU.

Examples of UNEP/GEF Terminal Evaluation reports are available at www.unep.org/eou

Review of the Draft Evaluation Report

Draft reports submitted to UNEP EOU are shared with the corresponding Programme or Project Officer and his or her supervisor for initial review and consultation. The GEF staff and senior Executing agency staff are allowed to comment on the draft evaluation report. They may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusion. The consultation also seeks feedback on the proposed recommendations. UNEP EOU collates all review comments and provides them to the evaluators for their consideration in preparing the final version of the report.

4. Submission of Final Terminal Evaluation Reports

The final report shall be submitted in electronic form in MS Word format and should be sent to the following persons:

Segbedzi Norgbey, Chief,

UNEP Evaluation and Oversight Unit

P.O. Box 30552-00100

Nairobi, Kenya

Tel: + (254-20) 762-4181

Fax: + (254-20) 762 3158

Email: Segbedzi.Norgbey@unep.org

With a copy to:

Maryam Niamir-Fuller

Director

UNEP/Division of GEF Coordination
P.O. Box 30552-00100
Nairobi, Kenya
Tel: + (254-20) 762 4166
Fax: + (254-20) 762 4041/2
Email: Maryam.Niamir-Fuller@unep.org

Jyoti Mathur-Filipp
Senior Communications Officer
UNEP/Division of GEF Coordination
P.O. Box 30552-00100
Nairobi, Kenya
Tel: + (254-20) 762 3765
Fax: + (254-20) 762 4041/2
Email: Jyoti.mathur-filipp@unep.org

The Final evaluation will also be copied to the following GEF National Focal Points.

{Insert contact details here}

The final evaluation report will be published on the Evaluation and Oversight Unit's website www.unep.org/eou and may be printed in hard copy. Subsequently, the report will be sent to the GEF Office of Evaluation for their review, appraisal and inclusion on the GEF website.

5. Resources and schedule of the evaluation

This final evaluation will be undertaken by an international evaluator contracted by the Evaluation Oversight Unit, UNEP. The contact for the evaluator will begin on **dd/mm/yy** and end on **dd/mm/yy** (# days) spread over # of weeks and # days of travel, to country, and # days desk study). The evaluator will submit a draft report on **dd/mm/yy** to UNEP EOU, the UNEP/DGEF Task Manager and key representatives of the executing agencies. Any comments or responses to the draft report will be sent to UNEP/EOU for collation and the consultant will be advised of any necessary revisions. Comments to the final draft will be sent to the consultant by **dd/mm/yy** after which, the consultant will submit the final report no later than **dd/mm/yy**.

The evaluator will after an initial telephone briefing with the EOU and UNEP/GEF conduct initial desk review work and later travel to (country (ies) and meet with the project staff at the beginning of the evaluation. Furthermore, the evaluator is expected to travel to (country (ies) and meet with representatives of the project executing agencies and the intended users of the project outputs.

In accordance with UNEP/GEF policy, all GEF projects are evaluated by independent evaluators contracted as consultants by EOU, The evaluator should have the following qualifications;

The evaluator should not have been associated with the design and implementation of the project in paid capacity. The evaluator will work under the overall supervision of the Chief, Evaluation and Oversight Unit, UNEP. The evaluator should be an international expert in { } with a sound understanding in { } issues. The consultant should have the following minimum qualifications: (i) experience in { } issues, (ii) experience with management and implementation of { } projects and in particular with { } target at policy –influence and decision making; (iii) experience with project evaluation. Knowledge of UNEP programmes and GEF activities is desirable, Knowledge of {specify language(s)} is an advantage. Fluency in oral and written English is a must.

6. Schedule of Payment

The consultant shall select of the following two contract options:

Lump-sum Option

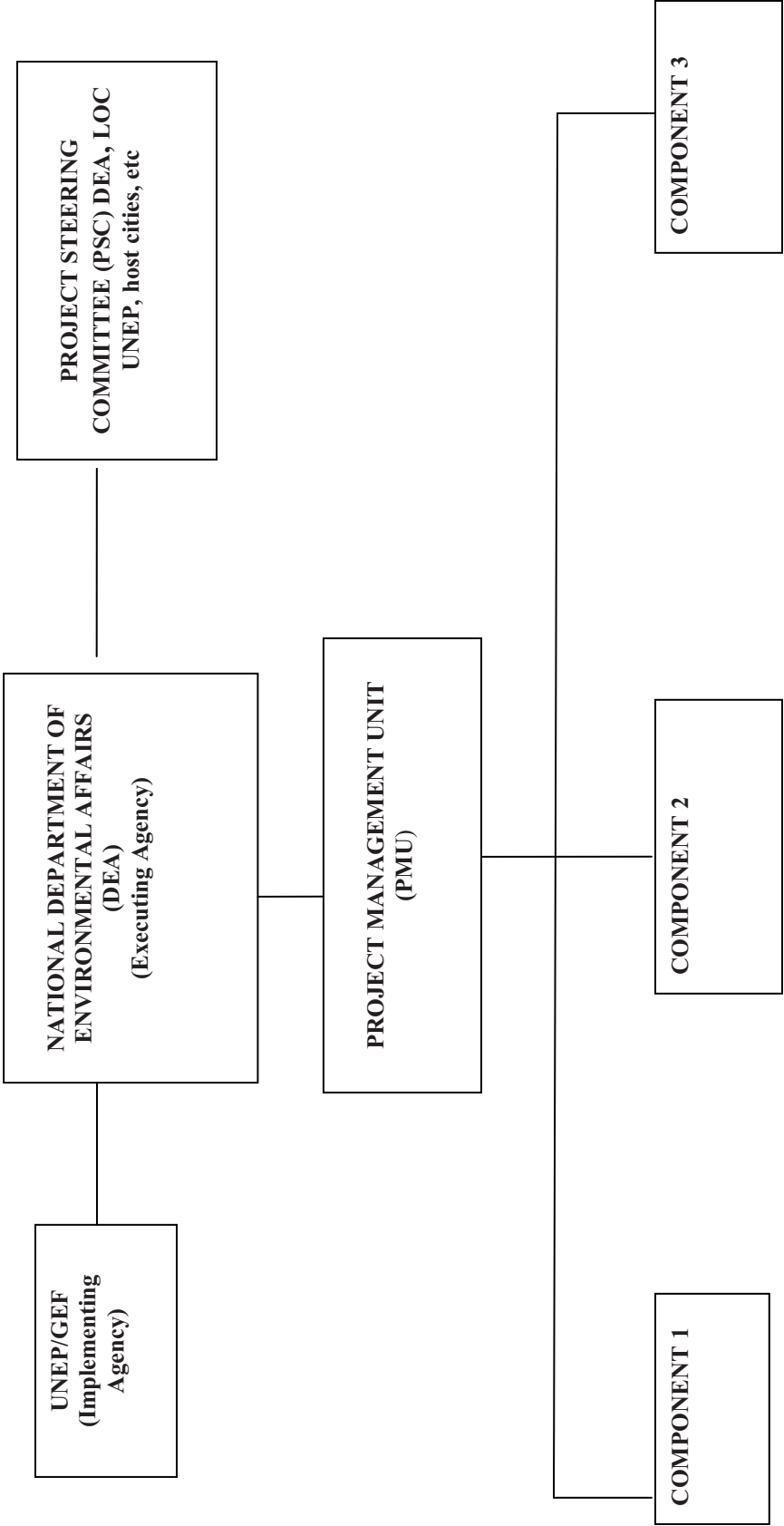
The evaluator will receive an initial payment of 30% of the total amount due upon signature of the contract. A further 30% will be paid upon submission of the draft report. A final payment of 40% will be made upon satisfactory completion of the work. The fee is payable under the individual Special Service Agreement (SSA) of the evaluator and is inclusive of all expenses such as travel, accommodation and incidental expenses.

Fee-only Option

The evaluator will receive an initial 40% of the total amount due upon signature of the contract. Final payment of 60% will be made upon satisfactory completion of the work. The fee is payable under individual SSA of the evaluator and is **NOT** inclusive of all expenses such as travel, accommodation and incidental expenses, Ticket and DSA will be paid separately.

In case the evaluator cannot provide the products in accordance with the TOR's, within the timeframe agreed, or his or her products are substandard, the payment to the evaluator could be withheld, until such a time the products are modified to meet UNEP standards. In case the evaluator fails to submit a satisfactory final product to UNEP, the product prepared by the evaluator may not constitute the evaluation report.

Appendix 10: Decision making and Organizational flow chart



Appendix 11: Terms of Reference

Position Titles	Tasks to be performed
Project Management	
Project Coordinator	Responsible for overall management, planning and coordination of the project activities. Deliver results and manage funds in line with the work plan approved by PSC; Analyze and evaluate achieved results regularly to ensure that the project is meeting the target beneficiaries' needs, and communicating them to all PSC members; Record and resolve project issues occurring during the implementation within the tolerance level initially defined by PSC; Report issues to PSC with recommendations for solutions to project issues that exceed the defined tolerance level; Discuss and deal with local and national authorities on matters pertaining to activities described in the project document; Ensure timely preparation and submission of yearly/quarterly project work plans and reports; Lead the recruitment process of the necessary local experts in the areas identified in the project document in accordance with UNEP rules and regulations; Collect, register and maintain information on project activities by reviewing reports and through first hand sources; Advise all project counterparts on applicable administrative and ensure their proper implementation.
Project Administrator	Responsible for the financial and administrative activities of the project including tracking the disbursement of project funds in compliance with UNEP rules and procedures. Collect, register and maintain all information on project activities; Contribute to the preparation and implementation of progress reports; Monitor project activities, budgets and financial expenditures; Advise all project counterparts on applicable administrative procedures and ensures their proper implementation; maintain project correspondence and communication; Support the preparations of project work-plans and operational and financial planning processes; Assist in procurement and recruitment processes; Assist in the preparation of payments requests for operational expenses, salaries, insurance, etc. against project budgets and work plans; Follow-up on timely disbursements by UNEP; Receive, screen and distribute correspondence and attach necessary background information; Prepare routine correspondence and memoranda for supervisor' signature, check enclosures and addresses; Assist in logistical organization of meetings, training and workshops; Prepare agendas and arrange field visits, appointments and meetings both internal and external related to the project activities and write minutes from the meetings; Maintain project filing system; Maintain records over project equipment inventory and perform other duties as required.
Technical Assistance	
EE Technical Expert	Core member of the project team creating continuity within the PMU, develop the roll-out implementation plan, oversee procurement process of technical services, technical leader for other short-term consultants and service providers, provide periodic reports, supervise data collection, provide oversight management of various aspects of the roll-out of the project, establish and maintain project management criteria and standards, e.g. develop TOR's for subcontractors, manage contractual arrangements with subcontractors, and oversee quality control, review of contractor's output according to established reporting requirements in the six host cities.
Promotion and marketing outreach expert	Responsible for providing general support for project activities related to activation of the green passport, and responsible tourism programme with the hospitality sector,
Independent Assessment Specialist	Conduct independent assessment on the greening of the 2010 FIFA World Cup™. TOR's to be developed Accordingly.
Final Assessment	

Appendix 12: Co-financing commitment letters from project partners

Appendix 13: Endorsement letters of GEF National Focal Points

I hereby wish to grant my endorsement for this project and would appreciate it if you could facilitate the approval of the funding.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Zaheer', with a long horizontal flourish extending to the right.

Zaheer Hakim

CHIEF DIRECTOR: IG&R AND
GEF OPERATIONAL FOCAL POINT

DATE: 18/06/2009

Appendix 14: Draft procurement plan

The GEF funds will be disbursed through inter United Nations agencies standard legal agreements (Letter of Agreement (LoA), between UNEP and the Department of Environment and Tourism (DEA) on the other hand, in accordance with UNEP rules and procedures. DEA will through a number of service level agreements (SLA) appoint service providers who will implement the various components of the project on behalf of the department.

Planned contracts

Partners	Financing Party	Type of funds	Amount	Project components
DEA	GEFFT	Grant	\$ 600,000	Component 1
DEA	GEFFT	Grant	\$250,000	Component 2
DEA	GEFFT	Grant	\$150,000	Component 3
TOTAL CONTRACTS			\$1,000,000*	

- Please note that this amount excludes the \$100,000 allocated to Project Management.

Appendix 15: Tracking Tools

The DEA, with funding from GTZ has developed a comprehensive set of tools for monitoring and evaluation environmental impacts generated by the construction of the stadia and related infrastructure. This M & E tool will be utilized by EE subcontractors to collect baseline data on energy consumption and record the resulting energy consumption savings from the six host cities. Following the inception workshop, detailed data will be collated to inform and indicate how the intervention has assisted in saving energy consumption and reducing the carbon footprint of the six host cities during the 2010 FIFA World Cup.

