Memorandum

To: Robert Ichord, Tony Pryor, Jeff Brokaw, John Wilson

CC: Christine Wegman, G/ENV/EET

From: Todd Harding, G/ENV/EET

Date: January 28, 1998

Subject: G/ENV/EET Performance Monitoring Plan

Attached is a draft copy of the G/ENV/EET Performance Monitoring Plan (PMP). EET will be presenting its PMP sometime in early February. However, we are still in the process of finalizing the document and would very much like to receive regional bureau comments on the PMP before we finish it.

Therefore, we would be grateful if you could look over our draft PMP. Our deadline for completing it is coming up soon so we would be appreciative if comments could be received by February 3.

Please send any comments you might have either to Christine Wegman or myself.

Thanks.

STRATEGIC SUPPORT OBJECTIVE 3

INCREASED, ENVIRONMENTALLY SUSTAINABLE ENERGY PRODUCTION AND USE

PERFORMANCE MONITORING PLAN

Global Environment Center

January 22, 1998

Strategic Support Objective 3

Increased Environmentally Sustainable Energy Production and Use

Performance Monitoring Plan

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OVERVIEW OF

STRATEGIC SUPPORT OBJECTIVE 3: INCREASED, ENVIRONMENTALLY SUSTAINABLE ENERGY PRODUCTION AND USE

The Environment Center pursues Strategic Support Objective 3 - *Increased, Environmentally Sustainable Energy Production and Use* to help developing countries set a course that integrates environmental and economic sustainability into their energy development. Support for SSO3 is based on the recognition that most developing countries must expand energy supply in order to achieve and maintain economic growth. However, this expansion often comes with environmental costs. More than 1.2 billion people live in cities with unacceptable levels of suspended particulate matter arising from the inefficient combustion of fossil fuels. Fossil fuel combustion accounts for 76 percent of the world's energy use and the principal source of greenhouse gas emissions globally.

Addressing global climate change is an U.S. foreign policy priority in which developing countries play a critical role. By 2015 it is expected that developing countries will emit more greenhouse gas emissions than OECD countries. Developing country commitments to specific reductions under the Framework Convention on Climate Change will be essential to its success. SSO3 represents USAID's core capacity to lead and support the U.S. government in addressing the energy aspect of the climate change challenge in developing countries.

Against this backdrop, the Environment Center supports SSO3 to address critical bottlenecks to the achievement of environmentally sustainable energy development, focusing primarily in USAID's key global climate change countries. To realize our objective, we pursue three high-level intermediate results:

- IR3.1 - Increased Energy Efficiency;
- IR3.2 - Increased Use of Renewable Energy Resources; and
- IR3.3 - Increased Production and Use of Cleaner Energy

Below these IRs, we have selected a common set of sub-results designed to promote those key enabling conditions required for environmentally sound energy growth (see figure 1). These sub-results aim to establish a favorable policy and regulatory climate, increase the availability of financing from public and private sector institutions, build capacity within host country organizations, and transfer technologies to developing countries.

Achieving SSO3 requires us to work closely with Missions and U.S. and host-country partners, which include national, state, and local governments, businesses, NGOs, and utilities. Among these partners, the private sector plays a central role in our strategy. Only private capital markets can command the financial resources needed to increase world energy supply to meet the growing demand, and only the incentives that drive private sector profitability can help ensure environmental sustainability.

Through support of SSO3, we expect to achieve, in coordination with our partners, the following results by FY2003, the last year of our strategy:

- Avoidance of more than 25 million tons of greenhouse gas emissions.

- Leveraging of over $1.3 billion of public and private sector investments to finance

environmentally sustainable energy.

- Adoption of 65 policies by national and state governments to provide the incentives and regulations required for sound energy development.

- Access to energy generated from solar, wind, mini-hydro, and other renewable sources for as many as 3.5 million rural and urban dwellers.

Performance Monitoring Plan

In developing indicators, the team struggled with the issue of how best to identify and track those results that are within its manageable interest and that take account of the long lag times required to shift the energy sector toward greater economic and environmental sustainability. We noted that the impacts of a national policy to provide incentives for the privatization of power generation could take years to yield measurable benefits in terms of delivering high quality, reliable, and cleaner energy. Demonstration projects that introduce new technologies or practices in a strategic sector may produce immediate results in the pilot site, but may require several years for the technology to be disseminated beyond the site, and then to generate measurable environmental and energy benefits.

In response to this challenge, we have selected SSO indicators that reflect important benchmarks along a continuum of results required to achieve environmentally sound energy production and use (see figure 2):

(i) *Greenhouse Gas Emissions Avoided* provides an environmental indicator of our highest level results once investments are expended and projects go on-line.

(ii) *Value of Public and Private Sector Financing Leveraged by G/ENV* is critical for assessing whether we can attract adequate financing for environmentally sound energy to ensure the continuation and replication of our programs and the implementation of policy and institutional reforms that we promote.

(iii) *Number of policies adopted and implemented to promote environmentally sound energy production and use* permits us to gauge our performance in supporting essential institutional and regulatory frameworks required to achieve improvements in the energy sector.

By tracking these indicators, we can measure the impacts beyond our immediate intervention in order to assess whether we are adequately addressing the energy and environmental problems of the countries and people we serve. Ultimately, we believe this approach allows us to optimize the use of our limited resources in this large and capital-intensive sector.

At the IR level, the team has selected a two-track approach to measure performance. At the first track, the team relies on "common" indicators to measure performance of key sub-results. The decision to adopt common indicators reflects a natural convergence of sub-results being pursued by each IR team. In addition, we believe the common indicators, as listed below, provide a valuable tool for aggregating and comparing performance data across all levels of the our framework.

(i) *Number of cases in which sustainable energy technologies are demonstrated and replicated in key sectors.*

(ii) *Number/Percent of host country energy institutions (governments, businesses, utilities) adopting improved operating and management practices, policies, and technologies.*

(iii) *Percent of training alumni reporting use of training content in their work.*

At the second track, each IR team has selected additional indicators tailored to measure unique lower-level results being pursued. These unique indicators are designed to assist with program management, and cannot be aggregated.

Critical Assumptions

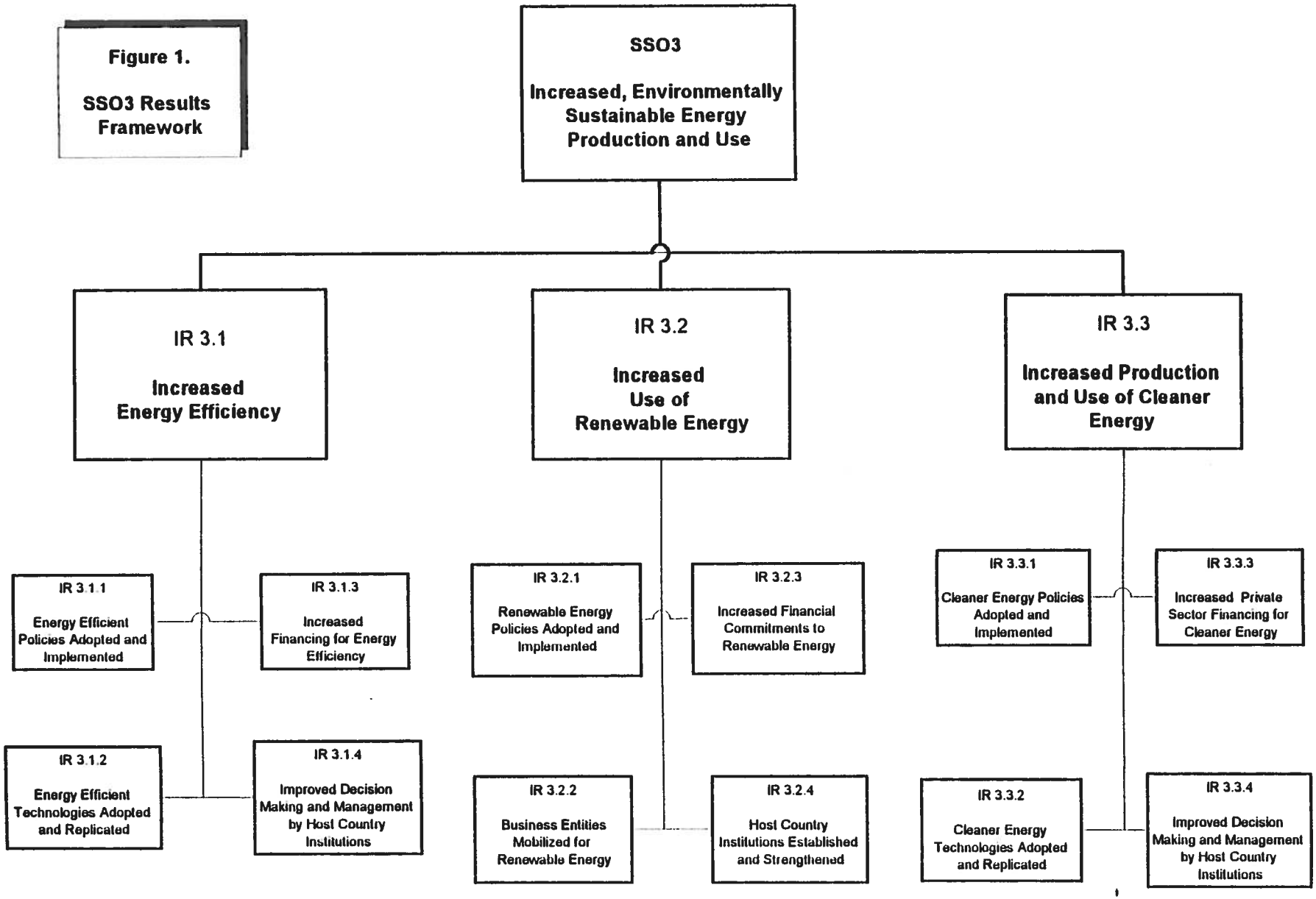
The following pages provide greater detail on our performance monitoring system, including our results framework, program and value-added indicators, and the performance monitoring plan. Our monitoring plan is still subject to modification based on further discussion with our partners, additional experience in gathering and testing data collection systems, and unexpected mission or bureau demand for our services under the new energy IQCs. Targets have been established based on several critical assumptions essential for achieving our objective:

(i) Contracting vehicles for G/ENV funded results packages will be fully operational.
(ii) Processing of mission-funded activities, such as task orders to the energy IQC, will be conducted within a reasonable amount of time.
(iii) Core funding for SSO3 will not fall below FY97 levels for the duration of the strategy.
(iv) SO3 staffing will be increased to at least FY96 levels.
(v) Additional staffing for global climate change functions will be made available.

Please note that several critical assumptions were not realized in FY97. Due to unforeseen contracting delays and staff shortfalls, our ability to achieve intended results was curtailed. IR3.3 - Increased Production and Use of Cleaner Energy, which lacked a contracting vehicle for most of the year, was especially hard hit and has adjusted its FY97 targets accordingly.

Figure 1.

SSO3 Results Framework



SSO3 PROGRAM INDICATORS

Result SSO3:	Increased, Environmentally Sustainable Energy Production and Use
Indicator 1:	Greenhouse Gas (GHG) Emissions Avoided
Unit of Measure:	Million tons of carbon equivalent (CTE)/year - annual cumulative emissions averted
Source:	Private Sector Sources, IQC; Host Country Industries an Utilities

Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	2.50	2.71	2.94	3.20	3.49	3.81	4.16	25.11
Actual	2.30								

Indicator Description:
GHG emissions avoided is based on assumption that G/ENV and partner support for the generation of environmentally-sustainable energy and for improved energy efficiencies will displace the need to use such fossil fuels as oil or coal. This indicator aggregates emissions averted annually by projects that came on-line in previous years with emissions averted from projects expected to come on-line in the targeted year. Factors for determining emissions avoided for individual projects are dependent on the application of that project and the type of fossil fuel displaced.

This indicator aggregates those avoided emissions based on three levels of results and impacts:

Level I — Actual results achieved for activities directly funded by G/ENV

Level II — Actual results achieved for activities partially funded by G/ENV, or for activities in which G/ENV contributed to development of policies, regulations, or project pre-investment.

Level III — Actual results achieved for activities replicated as a result of, but not directly supported by, G/ENV activities.

Result SSO3:	Increased, Environmentally Sustainable Energy Production and Use
Indicator 2:	Value of private and public investment leveraged by G/ENV
Unit of Measure:	U.S. Dollars (millions)
Source:	IQC; Collaborators; Industry; Cooperators and Stakeholders

Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	120	140	160	180	200	200	200	1314
Actual	114.6								

Indicator Description:

Mobilizing investments and engaging partner participation in environmentally sound energy production and use are priorities for SSO3. Accordingly, this indicator monitors obligations and commitments made to environmentally sustainable energy in association with G/ENV activities at three levels:

Level I - USAID mission and bureau funding obligated in conjunction with G/ENV activities

Level II -
a. External funding leveraged from partners for joint G/ENV activities;
b. Funding for activities in which G/ENV developed policies, regulations, or project pre-investment (prorated).
c. Obligated or committed funding for MDB loan programs (prorated).
d. Financial closure for private-sector funded programs (prorated).

Level III - Funding generated to replicate G/ENV-pioneered programs (new obligations, commitments or financial closure).

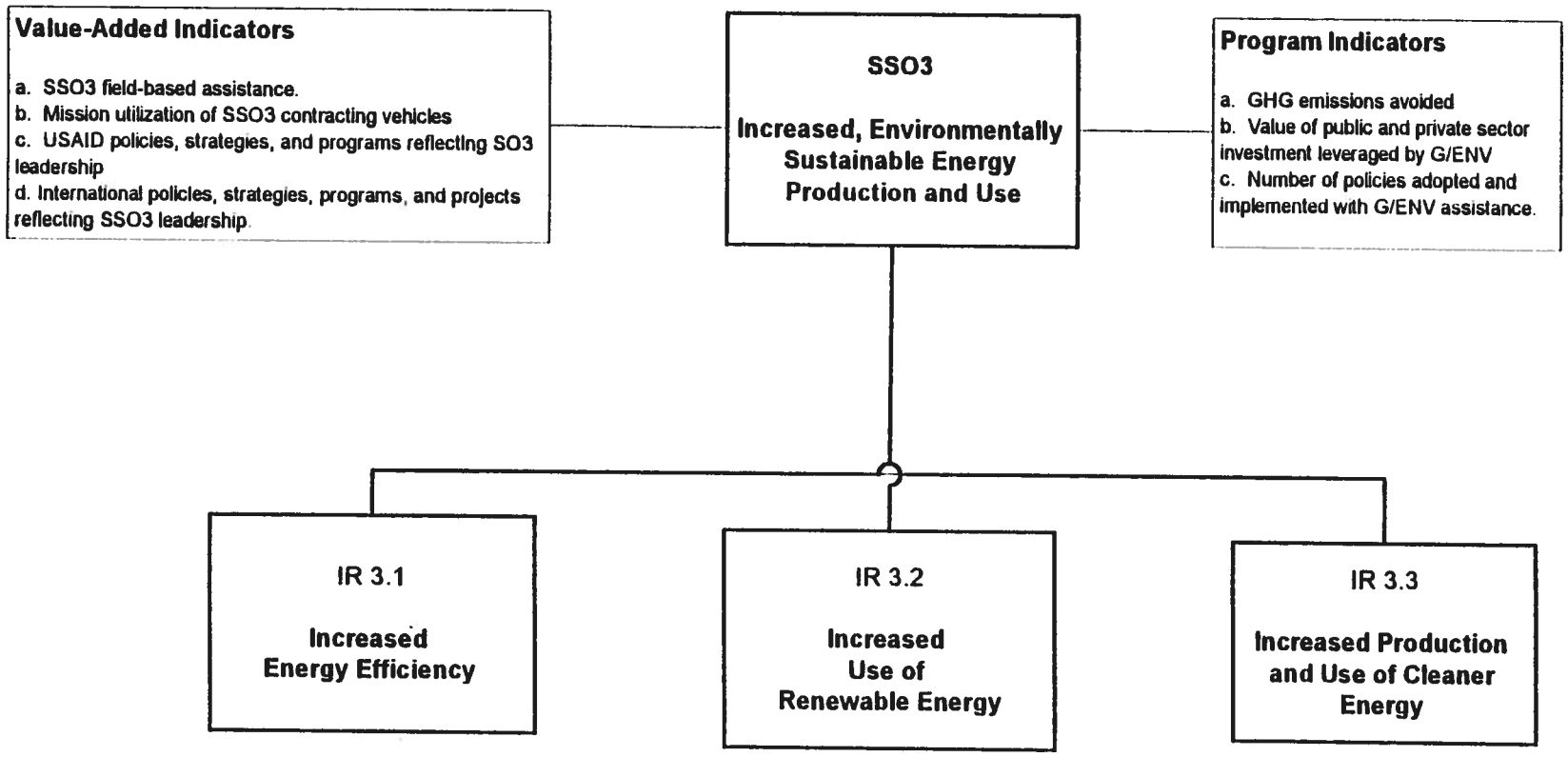
Result:	Increased, Environmentally Sustainable Energy Production and Use
Indicator 3:	Number of public policies adopted and implemented to promote environmentally sound energy production and use
Unit of Measure:	Number of policies
Source:	Private Sector Sources, IQC; Host Country Industries an Utilities

Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	7	8	9	9	9	9	9	65
Actual	5								

Indicator Description:
Indicator tracks the full spectrum of national, state, and local policy reforms in which G/ENV assistance plays an instrumental role in developing and implementing. G/ENV will track when policies are formally adopted by governmental bodies, and when policies are implemented. Results to be monitored from policy reforms may include tax restructuring; reductions of fossil fuel subsidies; private power purchase agreements; passage and enactment of energy codes and standards.

Figure 2

SSO3 Indicators



SSO 3 Value Added Indicator Tables

Result SSO3: G/ENV technical assistance utilized by missions.									
Indicator 1: G/ENV field-based assistance (TDYs) provided in response to mission/bureau requests.									
Unit of Measure: (a) Number of missions; (b) person days									
Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	**Baseline**	(a) 20 (b) 1200	(a) 20 (b) 1200	(a) 20 (b) 1200	(a) 20 (b) 1200	(a) 20 (b) 1200	(a) 20 (b) 1200	(a) 20 (b) 1200	(a) 140 (b)8400
Actual	(a) 20 (b) 1161	(a) (b)							

Indicator Description:

This indicator measures the number of Missions that authorized G/ENV TDYs for SSO3 activities or Mission-funded energy or climate change activities. Person Days consists of days on TDY by USAID personnel (direct hires, RSSA, and AAAS) and core-funded contractors.

SSO3 baseline indicators include TDYs to India to assist in the design of the Mission's renewable energy project, a TDY to Guatemala to assist G-CAP with the construction of the results framework for the CONCAUSA-funded energy activities, and a TDY to the Dominican Republic to help the Mission design its renewable energy program.

Result SSO3:	G/ENV contracting vehicles utilized by missions.								
Indicator 2:	Mission buy-ins, add-ons, OYB transfers, IQC task orders, managed orgs								
Unit of Measure: (a) Number of missions, (b) dollar value in millions									
Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	**Baseline**	(a) 9 (b)$5.01	(a) 9 (b)$5.01	(a) 9 (b)$5.01	(a) 9 (b)$5.01	(a) 9 (b)$5.01	(a) 9 (b)$5.01	(a) 9 (b)$5.01	(a) 63 (b)$35.07
Actual	(a) 9 (b)$6.05	(a) (b)							

Indicator Description:

The indicators are the number of contracting vehicles used and the number of missions that used them. The FY96 baseline is substantially higher than future targets because the FY96 figure includes monies from three initiatives that did not continue into FY97 - the Environmental Initiative for the Americas (EIA), the Asia Sustainable Energy Initiative (ASEI), and the Global Climate Change Initiative (GCCI). It was decided that the dollar value target for future years should be set at a lower level given that FY95 and FY96 had unusually high levels of Mission interest.

SSO3 baseline indicators include contracting vehicles utilized by the Egypt, Ghana, and Mongolia Missions as well as G/ENV's key six Missions - Brazil, India, Indonesia, Mexico, Philippines, and the Central American regional Mission (G/CAP).

Result SSO3:	Agency environmental objectives advanced within USAID through G/ENV technical leadership and field support.							
Indicator 3:	Number of USAID policies, strategies, and programs reflecting G/ENV leadership.							
Unit of Measure: Number of USAID policies, strategies, and programs.								
Year	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	**Baseline**	8	8	8	8	9	9	54
Actual	8							

Indicator Description:

SSO3 seeks to influence USAID environmental policy (sustainable energy and global climate change) at the Agency and Mission levels.

SSO3's baseline interventions include developing the agency's Developing Country Climate Change Initiative (DC3I) and working with the Brazil, Mexico, Philippine, Central American, and Nepal Missions to design sustainable energy programs.

Result SSO3:	Agency environmental objectives advanced in international fora through G/ENV international leadership
Indicator 4:	Number of international policies, strategies, programs, and projects reflecting G/ENV leadership.
Unit of Measure:	Number of international policies, strategies, programs, and projects. May include international conventions; MDB and other donors, USG initiatives)

Year	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	**Baseline**	4	4	4	4	5	5	26
Actual	4							

Indicator Description:

The focal areas of G/ENV's SSO3 international leadership are in shaping the U.S. government's position on international climate change issues and catalyzing additional sustainable energy investments by multilateral development banks.

SSO3's baseline interventions include catalyzing energy efficiency and renewable energy loans by the World Bank in Brazil, leveraging a loan mechanism for sustainable energy projects at the Inter-American Development Bank (IDB), and the leveraging of a $10 million fund by the Multilateral Investment Fund (MIF) for sustainable energy and environmental projects in Central America.

SSO3 Performance Monitoring Plan

PERFORMANCE INDICATOR	INDICATOR DEFINITION AND UNIT OF MEASUREMENT	DATA SOURCE	METHOD/ APPROACH OF DATE COLLECTION	DATA ACQUISITION BY G/ENV		DATA REGULARLY AVAILABLE AT G/ENV?	ANALYSIS & REPORTING	
				SCHEDULE/ FREQUENCY	RESPONSIBLE CONTRACTOR/ COOPERATOR		DEADLINE FOR REPORTING	RESPONSIBLE TEAM
SSO3: Increased, Environmentally Sustainable Energy Production and Use								
1. Greenhouse Gas Emissions Avoided	Definition: GHG emissions avoided is based on assumption that G/ENV and partner support for the generation of environmentally-sustainable energy and for improved energy efficiencies will displace the need to use such fossil fuels as oil or coal. Factors for determining GHG emissions averted are dependent on the application of each project and the type of fossil fuel that is displaced. This indicator aggregates those avoided emissions based on three levels of results and impacts: Direct - Actual results achieved for activities directly funded by G/ENV Leveraged - Actual results achieved for activities partially funded by G/ENV, or for activities in which G/ENV contributed to development of policies, regulations, pre-feasibility or feasibility studies. Catalyzed - Actual results achieved for activities replicated as a result of, but not directly supported by, G/ENV activities; or regional policy, regulatory, prefeasibility of feasibility work. Unit: Million tons of carbon equivalent (CTE)/year	IQC Contractors, Cooperators	methodological guide to determining GHG emissions to be determined to ensure consistency of emissions calculations.	Annually	IQC task order	No	End of fiscal year	SSO3

PERFORMANCE INDICATOR	INDICATOR DEFINITION AND UNIT OF MEASUREMENT	DATA SOURCE	METHOD/ APPROACH OF DATE COLLECTION	DATA ACQUISITION BY G/ENV		DATA REGULARLY AVAILABLE AT G/ENV?	ANALYSIS & REPORTING	
				SCHEDULE/ FREQUENCY	RESPONSIBLE CONTRACTOR/ COOPERATOR		DEADLINE FOR REPORTING	RESPONSIBLE TEAM
SSO3: Increased, Environmentally Sustainable Energy Production and Use								
2. Value of private and public investment leveraged by G/ENV	Definition Mobilizing investments and engaging partner participation in environmentally sound energy production and use are priorities for SSO3. Accordingly, this indicator monitors obligations and commitments made to environmentally sustainable energy in association with G/ENV activities at three levels Level I - USAID mission and bureau funding obligated in conjunction with G/ENV activities Level II - a External funding leveraged from partners for joint G/ENV activities, b Funding for activities in which G/ENV conducted original policy, regulatory, prefeasibility or feasibility work c Obligated or committed funding for MDB loan programs d Financial closure for private sector funded programs Level III -Funding generated to replicate G/ENV-pioneered programs (new obligations, commitments or financial closure) Unit U S Dollars (millions)	IQC Contractors, Cooperators	project monitoring	Annually	All IQC contractors and collaborators	No	End of Fiscal Year	SSO3
3. Number of policies adopted and implemented to promote environmentally sound energy production and use	Definition Indicator tracks the full spectrum of national, state, and local policy reforms in which G/ENV assistance plays an instrumental role in advancing. G/ENV will track when policies are formally adopted by governmental bodies, and when policies are implemented Results to be monitored from policy reforms may include tax restructuring, reductions of fossil fuel subsidies, private power purchase agreements, passage and enactment of energy codes and standards Unit Number of policies	IQC Contractors, Cooperators	Project Monitoring	Annually	All IQC contractors and collaborators	No	End of Fiscal Year	SSO3
COMMENTS/NOTES								

Intermediate Result 3.1

INCREASED ENERGY EFFICIENCY

Energy is critical for economic and social development. Energy fuels development in agriculture, industry, communications, health and transportation. Yet over two billion people in developing countries lack access to energy services. In many countries, frequent blackouts and brownouts are hindering industrial expansion. Most of the developing world lives with power shortages that decrease GDP by as much as $1 for every kilowatt-hour that energy demand exceeds supply. In general, developing nations spend 40% of total public investment on capitalizing the energy sector and still fail to keep pace with demand. Population growth and urban migration will continue to exacerbate current energy shortages and place further stress on infrastructure, seriously hindering economic growth and development in the decades ahead.

Energy efficiency is being increasingly recognized as the most cost effective means of addressing a variety of energy, economic and environmental problems facing developing countries. In the past, efficiency improvements have been used as a means of quickly and inexpensively addressing energy supply shortfalls. With trade becoming a more important factor in developing country economic growth, energy efficiency has more recently been adopted as a means of improving commercial and industrial competitiveness by reducing production costs. Now and in the future, energy efficiency is being viewed as one of the primary means of addressing both local pollution as well as the threat of global climate change. Because wisely implemented energy efficiency investments produce net dollar savings relative to new generation investments, the environmental or climate change benefits accrue at negative cost.

G/ENV's IR 3.1 fosters environmentally sound economic growth by promoting the efficient use of energy in developing countries. A wide-ranging effort across conventional sector boundaries, EEP promotes innovation in energy technology and in policy, financing, information, and institutional responses to the energy challenges facing the power and commercial sectors. The project accomplishes this by integrating public and private problem-solving approaches and by increasing private-sector awareness of and involvement in energy efficiency solutions worldwide.

IR 3.1's indicator is energy saved by adopting energy efficient technologies, practices, and policies. This figure is measured in megawatts and can easily be converted into a tonnes of carbon dioxide equivalent (based on the actual fuel mix in the electrical power sectors where the majority of the savings will be made) and easily "rolls-up" into the SO greenhouse gas emissions avoided figure.

G/ENV sees its role in the promotion of energy efficiency as essentially a catalytic one operating on several fronts. The efforts to support changes in the legal, regulatory, technological, financial, and decision-making environments are all necessary to create the proper incentives for public and private sector energy firms to make efficiency investments. IR 3.1's interventions are reflected at the sub-IR level: there are four indicators: energy efficiency policies adopted and implemented; energy efficient technologies implemented and replicated; increased investment in energy efficiency; and, improved decision making and management by host country institutions.

Target indicators are supplied at the IR level in an aggregated manner as described above. The Center will focus its attention in selected key countries and on activities that will generally impact the implementation of energy efficiency measures in a preferred group of technological areas expected to have a high impact on overall energy savings. All the lower level indicators in the results packages refer to programs and measures that are project or country level specific, and consequently can only be applied at the project or country level. As individual support activities are developed jointly with the Missions,

these performance indicators will be incorporated into the specific scopes of work. These results will be used to substantiate the aggregated targets defined at the IR level.

As an example of a project that integrates capacity building and focused policy efforts with an investment goal, G/ENV has been supporting the Mexican government since early 1993 with an industrial motors demand side management (DSM) pilot project. Capacity building activities have played a major role in preparing the Mexican governmental organizations for implementing the pilot project and designing a large scale country-wide motor efficiency project. Much of the technical assistance has been provided by highly qualified local consultants. Training was provided in 1994-5 in the areas of motor audits and project evaluation. A computerized demand side management program called DSManager that was originally developed in the U.S. by EPRI was transferred to CONAE, and training was provided on the use of software. Motor procurement under the pilot project was initiated in 1996. The initial success of this pilot project was instrumental in encouraging the national utility to develop a motor efficiency standard and to allocate $80 million for a large-scale motors program.

The direct savings that can be attributed to the pilot project are a peak power reduction of 1.2MW and an energy savings of 9.4GWh/yr. The amount of CO_2 avoided because of the higher efficiency motors in this pilot will increase to 7800 tons annually when all the motor replacements have been completed.

The indirect savings that can be attributed to the capacity building and policy activities are more difficult to ascertain, but an estimate can be made after the wide-scale government funded motor upgrade program has been designed and implemented. Only then will the mix of motors and the corresponding efficiency improvements be known. It is reasonable to conclude that without USAID's intervention in the motors area, a large government funded program would not have been initiated, at least not in the current time frame. Therefore it is plausible to conclude that there is a linkage between USAID's activities and the resulting hardware implementation program, and that the GHG emissions reductions can at least partially be attributed to USAID actions. Projects such as this will be monitored over a 5-10 year period to evaluate and monitor the final impact of the institution building activities conducted under the pilot project, and the GHG savings that can be ascribed to USAID actions will be tracked.

IR 3.1 Increased Energy Efficiency

Indicator:

- Energy Saved by Adopting Energy Efficient Technologies, Practices, and Policies

IR 3.1.1 Energy Efficient Policies Adopted and Implemented

- Number of cleaner policies adopted and implemented

IR 3.1.2 Energy Efficient Technologies Implemented and Replicated

- Number of cases in which energy efficient technologies are demonstrated and replicated in key sectors
- Percent of companies within G/ENV-targeted industries using efficient technologies

IR 3.1.3 Increased Investment in Energy Efficiency

- Value of private and public investment leveraged by G/ENV
- Number of new ESCO projects in key countries
- Additional MDB lending for efficiency

IR 3.1.4 Improved Decision Making and Management by Host Country Institutions

- Number of host country energy institutions adopting improved operating policies, practices, or technologies
- Percent of training alumni reporting use of training content in their work

Performance Data Tables

Result IR 3.1:	Increased Energy Efficiency
Indicator 1:	Energy saved by adopting energy efficient technologies, practices, and policies
Unit of Measure:	Megawatts
Source:	IR 3.1 Contractors and Cooperators

Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	10	12	14	16	18	20	22	112
Actual	8								

Indicator Description:
This indicator measures the energy saved (in megwatts) as a result of IR 3.1 interventions. This saving may be direct, such as through demonstration projects, or may be as a result of the catalytic role of IR 3.1's activities. To provide context, 1 megawatt will provide electric power to a community of about 5,000 residents in a developing country.

Result IR 3.1.1:	Energy Efficiency Technologies Adopted and Implemented								
Indicator 1:	Number of energy efficiency policies adopted and implemented								
Unit of Measure:	Number of policies								
Source:	G/ENV project tracking; computed on a per project basis								
Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	5	5	5	5	5	5	5	35
Actual	5								

Indicator Description:
Indicator tracks the full spectrum of national, state, and local policy reforms in which G/ENV assistance plays an instrumental role in advancing. G/ENV will track when policies are formally adopted by governmental bodies, and when policies are implemented. Results to be monitored from policy reforms may include tax restructuring; reductions of fossil fuel subsidies: private power purchase agreements; passage and enactment of energy codes and standards.

Result IR3.1.2:	Energy Efficiency Technologies Adopted and Replicated								
Indicator 1:	Number of cases in which efficient technologies are demonstrated and replicated in key industries								
Unit of Measure:	Number								
Source:	G/ENV project tracking; computed on a per project basis								
Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	2	2	2	2	2	2	2	14
Actual	2								

Indicator Description: Each energy efficiency program will track the number of cases in which a G/ENV introduced technology is demonstrated in a key industry, and then replicated by partners. Key industries where technologies will be tracked include food processing, tanneries, lighting, and manufacturing.

Result IR3.1.2:	Energy Efficiency Technologies Adopted and Replicated								
Indicator 2:	Percentage of companies within G/ENV-targeted industries utilizing energy efficient technologies								
Unit of Measure:	Percent								
Source:	G/ENV project tracking								
Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	22%	24%	26%	28%	30%	30%	30%	
Actual	20%								

Indicator Description:
G/ENV will monitor the extent to which companies within targeted industries adopt IR3.1-promoted energy efficiency technologies. Over time a rising percentage should be seen as firms hear more and more about the environmental and economic benefits of efficient energy use.

Result IR 3.1.3: Increased Investment in Energy Efficiency

Indicator 1: Value of private and public investment leveraged by G/ENV

Unit of Measure: U.S. Dollars (millions)

Source: IQC; Collaborators; Industry; Cooperators and Stakeholders

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	Baseline	$85 m	$85 m	$85 m	$90 m	$90 m	$95 m	$100 m	$630 m
Actual	$83.5 m								

Indicator Description:

Mobilizing investments and engaging partner participation in environmentally sound energy production and use are priorities for SO3. Accordingly, this indicator monitors obligations and commitments made to environmentally sustainable energy in association with G/ENV activities at three levels:

Level I - USAID mission and bureau funding obligated in conjunction with G/ENV activities

Level II -
a. External funding leveraged from partners for joint G/ENV activities;
b. Funding for activities in which G/ENV developed policies, regulations, or project pre-investment.
c. Obligated or committed funding for MDB loan programs.
d. Financial closure for private-sector funded programs.

Level III - Funding generated to replicate G/ENV-pioneered programs (new obligations, commitments or financial closure).

Result IR 3.1.3:	**Increased Investment In Energy Efficiency**
Indicator 2:	Number of new energy service companies (ESCO) projects in key countries
Unit of Measure:	Number
Source:	Private Sector Sources, IQC; Host Country Industries an Utilities

Year	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	2	2	2	2	2	2	14
Actual	2							

Indicator Description:
ESCO development is an important part of IR 3.1. The development and promotion of nascent ESCO industries in selected G/ENV-assisted countries can do much to establish energy efficiency as a means of saving money, increasing competitiveness, and being environmentally friendly.

Result IR3.1.4:	Improved Decision making and Management by Host Country Institutions
Indicator 1:	Number of host country institutions adopting improved operating policies, practices, or technologies
Unit of Measure:	Number of electric utilities, government agencies, businesses
Source:	G/ENV project tracking; computed on a per project basis

Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	5	5	5	5	5	5	5	35
Actual	5								

Indicator Description: As energy institutions shift from centrally planned to market economies, new tools for planning, analysis, regulation, and training are necessary to facilitate this transition. Under IR 3.1, each public or private institution receiving G/ENV assistance will define the result being pursued to strengthen its institutional capacity. To be counted under this indicator, the targeted result must be reached.

Result IR3.1.4:	Improved Decision making and Management by Host Country Institutions								
Indicator 2:	Percent of training alumni reporting use of training content in their work								
Unit of Measure:	Percent								
Source:	G/ENV survey								
Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Actual									

Indicator Description: This indicator is based on a survey of program graduates, and is intended to capture the degree to which participants are able to use the program content to promote and/or implement IR 3.1. Tracking of this indicator will be conducted periodically on an as needed basis.

Performance Monitoring Plan
IR 3.1

PERFORMANCE INDICATOR	INDICATOR DEFINITION AND UNIT OF MEASUREMENT	DATA SOURCE	METHOD/ APPROACH OF DATE COLLECTION	DATA ACQUISITION BY G/ENV		DATA REGULARLY AVAILABLE AT G/ENV?	ANALYSIS & REPORTING	
				SCHEDULE/ FREQUENCY	RESPONSIBLE CONTRACTOR/ COOPERATOR		DEADLINE FOR REPORTING	RESPONSIBLE TEAM
SSO 3: Increased, Enviromentally Sustainable Energy Production and Use IR 3.1: Increased Energy Efficiency								
1. Energy saved by adopting energy efficient technologies, practices, and policies	Definition: Utility, industrial and residential energy savings as a result of IR 3.1 interventions or as the result of catalytic role that IR 3.1's activities play. Unit: Megawatts. To provide context, 1 megawatt will provide electric power to a community of about 5,000 residents in a developing country.	As part of each new project implemented, the expected energy savings will be determined by the responsible G/ENV contractor or cooperator.	Periodic monitoring of/follow-up to programs and projects supported by IR 3.1 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	May 15 and November 15 of each year.	IR Team Leader
2. Number of energy policies adopted and implemented	Definition: Energy efficiency policies resulting at least partially from G/ENV assistance will be counted when they are formally adopted by host governments and when the policies are implemented. Unit: Number	Relevant IR 3.1 contractor or cooperator	Periodic monitoring of/follow-up to programs and projects supported by IR 3.1 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	May 15 and November 15 of each year.	IR Team Leader

3. Number of cases in which efficient technologies are demonstrated and replicated in key industries	Definition: Each IR 3.1 activity will track the number of cases in which a G/ENV-introduced technology is demonstrated in a key industry, and then replicated by partners. Key industries where technologies will be tracked include food processing, tanneries, lighting, and manufacturing. Unit: Number	Relevant IR 3.1 contractor or cooperator	Periodic monitoring of/follow-up to programs and projects supported by IR 3.1 funding, and monitoring of replications that may occur	Annual	An IQC contractor will have overall responsibility.	No	May 15 and November 15 of each year.	IR Team Leader
4. Percentage of companies within G/ENV-targeted industries utilizing energy efficient technologies	Definition: G/ENV will monitor the extent to which companies within targeted industries adopt IR 3.1-promoted energy efficiency technologies. Unit: Percent	Relevant IR 3.1 contractor or cooperator	Periodic monitoring of/follow-up to programs and projects supported by IR 3.1 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	May 15 and November 15 of each year.	IR Team Leader
5. Value of private and public sector investment leveraged by G/ENV	Definition: This indicator tracks three categories of serious financial commitments that are made for energy efficiency projects, prior to construction or installation of functioning hardware: (a) approval of loan packages dedicated to energy efficiency by multilateral development banks, (b) financial closure on specific projects by the private sector; and (c) obligation of financing for energy efficiency technologies by non-MDB public sector entities. The intention of this indicator is to capture serious signals of intermediate sccess in mobilizing financing for investment. Unit: U.S. Dollars (millions)	Relevant IR 3.1 contractor or cooperator	Periodic monitoring of/follow-up to programs and projects supported by IR 3.1 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	May 15 and November 15 of each year.	IR Team Leader
6. Number of new ESCO projects in key countries	Definition: The development and promotion of energy service companies (ESCOs) can do much to establish energy efficiency as a means of saving money, improving competitiveness and being environmentally beneficial. Unit: Number	Relevant IR 3.1 contractor or cooperator	Periodic monitoring of/follow-up to programs and projects supported by IR 3.1 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	May 15 and November 15 of each year.	IR Team Leader

7. Number of host country institutions adopting improved operating policies, practices, or technologies	Definition: Capacity building is essential for the use and advocacy of energy efficiency. Institutions include ministries, utilities, NGOs, and private sector firms. Unit: Number	Relevant IR 3.1 contractor or cooperator	Periodic monitoring of/follow-up to programs and projects supported by IR 3.1 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	May 15 and November 15 of each year.	IR Team Leader
8. Percent of training alumni reporting use of training content in their work	Definition: This indicator is intended to capture the degree to which participants are able to use their IR 3.1-supported energy efficiency training. Unit: Percentage of respondents reporting use of training content in their work.	Relevant IR 3.1 contractor or cooperator	Periodic monitoring of/follow-up to programs and projects supported by IR 3.1 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	May 15 and November 15 of each year.	IR Team Leader

Intermediate Result 3.2

INCREASED USE OF RENEWABLE ENERGY

A critical component of the Environment Center's objective of environmentally sound energy use is the promotion of renewable energy. Compared to the use of fossil fuels, the use of geothermal, biomass,[1] solar, wind, and hydrologic[2] resources creates dramatically fewer negative environmental stresses.

Although continued R&D is important for renewable energy technologies, USAID believes that the current availability of competitive renewable energy technologies justifies an Agency focus on accelerating the penetration of those technologies into the marketplace of host countries. Historically, the dominance of particular fuels has created strong institutional biases that serve as constraints to adoption of newer technologies. Much of the Center's program is directed at overcoming those institutional questions.

With respect to the intermediate objective of increasing the use of commercial renewable energy technologies, the Center divides the anticipated results, and the measurement of those results, into two categories:

1. New on-grid systems installed (systems providing electricity to a national or regional electricity grid, which in turn delivers the electricity from possibly a variety of sources to a relatively large number of consumers), as measured in megawatts (MW) of capacity.

2. New small-scale systems installed (generally, but not always) away from the existing grid) for individual users, households, businesses (including agriculture), schools, or health clinics, measured simply in numbers of systems (with a reasonable degree of breakdown among those various uses). Individually, these systems typically have a capacity measured in watts or kilowatts, and so compared to the MW of on-grid facilities they appear unimpressive, but their developmental importance as models for the accelerated delivery of energy services to populations previously unserved or underserved is important to the Agency.

Although the Environment Center believes that these indicators are appropriate and necessary for judging success, the Center (and most USAID Missions) in most cases lacks sufficient budget to finance the systems themselves. Critical to Center success, therefore, is the identification of interventions that stimulate others to invest, especially the private sector but with

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Within the broad field of biomass energy, the Environment Center focuses on the use of residues in agricultural or wood-products industries as energy resources, such as the use of bagasse from sugar cane production as a fuel for cogeneration facilities.

In numerous cases, large hydroelectric facilities have had significant negative environmental and socio-economic impacts. Because of this, the Environment Center focuses on small hydro, defined here as less than 50 MW, and attempts to be diligent in assuring minimal negative ramifications. In such cases, the Center contends that hydro is significantly preferable to fossil fuels.

an additional focus on stimulating the Multilateral Development Banks to offer loan packages that in turn serve as a catalyst with respect to the private sector. The second level of the framework for IR 3.2 reflects the shorter-term results that the Center anticipates it can directly achieve. But the framework holds the Center accountable for the hypothesis that this level will then lead to investments and finally commercial systems in place. It is important to recognize, however, that it can take from one month to two or three years for the intervention to lead to the second-level result and cumulatively 1-7 years for the intervention to lead to the top-level result. Results recorded between 1996 and 2003, therefore, often will be due to activities funded as far back as 1989.

At the second level of the framework for this IR are four categories of results and indicators:

IR3.2.1 - Adoption and implementation of policy or regulatory changes.
This can include either (a) action with respect to general energy policy or electricity policy that implicitly or explicitly clarifies or establishes a role for renewable energy or reduces subsidies for non-renewable energy resources, or (b) more targeted action that clarifies or establishes action that clarifies or establishes rights or incentives of relevance to specific renewable energy resources, such as water rights for hydroelectric development or access to geothermal resources.

IR 3.2.2 Mobilization of business entities to pursue renewable energy.
As a clear result of policy changes, direct funding, technical assistance, or training, a business (or joint venture between U.S. and host-country firms) may decide to pursue specific renewable energy project opportunities.

IR 3.2.3 Increased financial commitments to the use of renewable energy technologies.
This indicator tracks three categories of serious financial commitments that are made for renewable energy projects, prior to construction or installation of functioning hardware: (a) approval of loan packages dedicated to renewable energy by the multilateral development banks (public sector); (b) financial closure on specific projects by the private sector (which may include financing from private banks); and © obligation of financing for renewable energy technologies by non-MDB public sector entities. The intention of this indicator is to capture serious signals of intermediate success in mobilizing financing for investment. When systems subsequently are constructed or installed and are operating, then the data is reflected in the top-level indicators for IR3.2.

IR 3.2.4 Establishment or strengthening of host-country non-profit institutions.
This indicator tracks new institutions established (for instance, a Renewable Energy Project Support Office) or existing institutions strengthened (by provision of direct funding, technical assistance, or training) explicitly for the purpose of promoting renewable energy. Under IR 3.2, each public or private non-profit institution receiving G/ENV assistance will define the result being pursued to strengthen its institutional capacity. To be counted under this indicator as "strengthened," the targeted result must

be reached.

The performance indicators for measuring progress against the renewable energy objectives are of varying types and therefore require several different approaches for collecting and analyzing the data. Essentially, the results and their indicators fall into three general categories:

1. Direct results that are due entirely to the USAID program(s).
2. Indirect results for which the USAID program(s) played a shared but critical and necessary role.
3. "Spin-off" or "replication" results that occurred without active USAID program involvement but that would not have occurred if not for the work of USAID program(s).

Several different data sources will be used, depending on the particular result and indicator. In some cases, especially where results are due entirely to USAID program(s), the data will be automatically collected and tracked as part of normal program implementation. In other cases, data will be collected from appropriate financial, business, government, and non-governmental organizations that are either partnered with the USAID programs or are targeted by the USAID programs. Where possible, actual numbers (such as for the "number of laws improved" indicator) will be tracked and totaled. When direct measurement is not possible (such as for the "funds invested" indicator), structured questionnaires will be sent to the above organizations to provide best estimates. The indicator"tons of CO2 avoided" will be calculated from data gathered for other indicators.

As in all performance-monitoring efforts, the need for accurate, detailed, and comprehensive data must be balanced against the cost of collecting and analyzing it. For some activities (those falling into the first type, above), progress will be tracked in real time as part of program implementation and reported quarterly. Data for the other results will be collected and reported once a year in accordance with annual work plans. Results will also continue to be reported in the USAID semiannual "accomplishment review" meetings.

Responsibility for acquiring the data on activities under the USAID renewable energy program will rest with the cooperators implementing the particular activities. USAID will coordinate the efforts among the cooperators and combine the data as appropriate where different cooperators are achieving results against the same indicator. The cooperators will rely on in-country sub-cooperators, subcontractors, and partner organizations as appropriate. The Renewable Energy Project Support Offices will play a lead role in collecting data specific to USAID's priority countries.

The indicators chosen under the renewable energy program are not expected to require much analysis to provide a useful assessment of progress toward the objective. Progress (results) for different activities will be compared against each other and the activities under other programs to assess which activities are providing the best payoff. This will be used as input for determining future activities and program direction.

The cooperators under the renewable energy program have not in the past dedicated an explicit part of their budgets to measuring progress against a results framework. They will do so in the future; these costs are expected to represent up to 5 percent of their respective budgets. In addition, G/ENV/EET will use its IQC mechanism to oversee the calculation and reporting of the specific SSO indicator dealing with displaced carbon.

IR 3.2 Increased Use of Renewable Energy

Indicators:

- Newly Installed Capacity - On Grid
- Newly Installed Capacity - Off Grid

IR 3.2.1 Renewable Energy Policies Adopted and Implemented

- Number of policies adopted / implemented that clearly favor renewable energy

IR 3.2.2 Business Entities Mobilized for Renewable Energy

- Number of businesses investing in, and forming joint ventures for, renewable energy

IR 3.2.3 Increased Financial Commitments to Renewable Energy

- New financing explicitly made available for, or committed to, renewable energy projects by the private and public sector

IR 3.2.4 Host Country Institutions Established and Strengthened

- Number of host-country energy institutions established and significantly strengthened for the purpose of promoting renewable energy

IR 3.2 Increased Renewable Energy Production

Result IR 3.2: Increased Use of Renewable Energy

Indicator 1: Newly installed capacity on-grid

Unit of Measure: Megawatts (MW)

Source: Collaborators, Cooperators, and Stakeholders

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	Baseline	80	85	90	95	100	105	110	714
Actual	49								

Indicator Description:

This indicator measures the capacity (in megawatts) of new generation facilities using renewable energy that come on line, providing electricity to national or regional utility grids, as a result of the catalytic role IR 3.2's activities are playing. To provide context, 1 MW will provide electric power to a community of about 5,000 residents in a developing country.

Note: The datum reported for 1996 is lower than the datum report during the 1997 R4 process, because it was later discovered that some plants that had been expected to go on line during 1996 were delayed by several months.

Result IR 3.2: Increased Renewable Energy Production

Indicator 2: Newly installed systems off-grid

Unit of Measure: The number of households, businesses, and service centers (health clinics, schools, etc.) that benefit from the small-scale energy systems.

Source: Collaborators, Cooperators, and Stakeholders

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	Baseline	4,000	8,000	16,000	30,000	50,000	75,000	100,000	284,530
Actual	1,530								

Indicator Description:

Definition: Small renewable energy systems, not connected to the utility grid, provide energy services (electricity, heat, etc.) or other services for which energy is a necessary intermediary (such as water that needs to be pumped other than by animal power) to households, enterprises, telecommunications facilities, and social service centers (health clinics, schools, etc.).

Result IR 3.2.1: Renewable Energy Policies Adopted and Implemented

Indicator 1: Number of policies or regulations adopted and implemented that are clearly favorable to renewable energy

Unit of Measure: Actual number of policies or sets of regulations adopted and implemented

Source: G/ENV project tracking

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	Baseline	2	2	2	2	2	2	2	14
Actual	0								

Indicator Description:

This indicator tracks the national, state, and local policy or regulatory reforms that IR 3.2 plays an instrumental role in advancing. IR 3.2 will track when policies or regulations are formally adopted by governmental bodies, and when those policies or regulations are implemented. Results to be monitored may include incentives adopted, subsidies for fossil fuels reduced or eliminated, and improved access laws for renewable energy resources.

Result IR 3.2.2:	Business Entities Mobilized for Renewable Energy
Indicator 3:	Businesses investing and joint ventures formed
Unit of Measure:	Actual number of businesses initiating new or more active pursuit of specific projects, and new joint ventures formed (with specific promotion of U.S.-host country private sector partnerships) to do so.
Source:	G/ENV project tracking

Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	9	12	15	15	20	20	25	122
Actual	6								

Indicator Description: This indicator tracks the number of businesses that, as a result of assistance funded by IR3.2, decide to pursue or increase the pursuit of developing specific renewable energy projects. The USAID assistance itself is not sufficient to be counted, but rather a continuation of pursuit after that assistance. In addition, new businesses or joint ventures that are newly formed with or as a result of IR3.2 activity, with subsequent activity in pursuit of projects, will be counted.

Result IR 3.2.3:	Increased Financial Commitments to Renewable Energy
Indicator 1:	New Financing Explicitly Made Available for, or Committed to, Renewable Energy Projects by the Private or Public Sector
Unit of Measure:	U.S. Dollars (million)
Source:	G/ENV project tracking;

Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	375	150	175	200	225	250	275	1700
Actual	50								

Indicator Description: This indicator tracks three categories of serious financial commitments that are made for renewable energy projects, prior to construction or installation of functioning hardware: (a) approval of loan packages dedicated to renewable energy by the multilateral development banks (public sector); (b) financial closure on specific projects by the private sector (which may include financing from private banks); and © obligation of financing for renewable energy technologies by non-MDB public sector entities. The intention of this indicator is to capture serious signals of intermediate success in mobilizing financing for investment. When systems subsequently are constructed or installed and are operating, then the data is reflected in the top-level indicators for IR3.2.

Result IR3.2.4:	Host-Country Non-Profit Institutions Established or Strengthened
Indicator 1:	Number of host-country country institutions (E) established and (S) significantly strengthened for the purpose of promoting renewable energy
Unit of Measure:	Actual number of public sector or non-profit NGOs established or strengthened (including on-going strengthening, and thus institutions counted more than once)
Source:	G/ENV project tracking

Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	(E) 1 (S) 6	(E) 1 (S) 7	(E) 2 (S) 8	(E) 1 (S) 9	(E) 1 (S) 10	(E) 1 (S) 12	(E) 1 (S) 14	(E) 9 (S) 40
Actual	(E) 1 (S) 6								

Indicator Description: This indicator tracks new institutions established (for instance, a Renewable Energy Project Support Office) or existing institutions strengthened (by provision of direct funding, technical assistance, or training) explicitly for the purpose of promoting renewable energy. Under IR 3.2, each public or private non-profit institution receiving G/ENV assistance will define the result being pursued to strengthen its institutional capacity. To be counted under this indicator as "strengthened," the targeted result must be reached.

Result IR 3.2: Increased Renewable Energy Production

Indicator 3: Value of private and public investment leveraged by G/ENV

Unit of Measure: U.S. Dollars (millions)

Source: IQC; Collaborators; Industry; Cooperators and Stakeholders

Year	1996	1997	1998	1999	2000	2001	2001	2003	Total
Target	Baseline	375	100	125	150	175	200	225	1,411
Actual	61								

Indicator Description:

Engaging partner participation and subsequent investment, especially from the private sector, in cleaner energy production and use is the highest result IR 3.3 is pursuing. The public sector cannot meet more than a small portion of the growing energy demands in USAID-assisted countries. Only private capital markets can command the necessary financial resources in the mid- and long terms, although the MDBs can play an important role in showing leadership that in turn serves as a catalyst to the private sector.

A measure of G/ENV's success in catalyzing partner investment in support of Agency environmental goals is calculated by additing direct partner contributions to G/ENV programs; and catalyzed investments by G/ENV

Result IR 3.2:	Increased Renewable Energy Production
Indicator 3:	GHG Emissions Avoided
Unit of Measure:	Tons in thousand of CO2 avoided (on- and off-grid renewable energy generation)
Source:	Collaborators, Cooperators and Stakeholders

Year	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Target	Baseline	160,000	180,000	200,000	225,000	250,000	275,000	300,000	1,679,000
Actual	89,000								

Indicator Description:
Tracking IR3.2's contributions to GHG emissions avoided relies on two separate measures to capture the direct and indirect results. While it is impossible to measure accurately GHG emissions, the indicator is a good proxy for the environmental soundness of G/ENV's programs. GHG emissions form fossil energy generation (including refining and conversion), transmission, distribution and end use.

Avoided GHG emissions that fall within G/ENV's manageable interests are measured in two ways:

(D) emissions avoided by USAID-funded or directly assisted activities; and
(C) emissions avoided by projects USAID catalyzed.

To generate amount of greenhouse gases avoided, tons of coal based generated carbon dioxide displaced by grid-connected renewables at a displacement rate of 9,000 tons of carbon dioxide per megawatt per year. Off-grid contributions also will depend on cumulative renewable energy that is assumed to displace coal-based electricity generation.

Performance Monitoring Plan
IR 3.2

PERFORMANCE INDICATOR	INDICATOR DEFINITION AND UNIT OF MEASUREMENT	DATA SOURCE	METHOD/ APPROACH OF DATE COLLECTION	DATA ACQUISITION BY G/ENV		DATA REGULARLY AVAILABLE AT G/ENV?	ANALYSIS & REPORTING	
				SCHEDULE/ FREQUENCY	RESPONSIBLE CONTRACTOR/ COOPERATOR		DEADLINE FOR REPORTING	RESPONSIBLE TEAM
SSO 3: Increased, Enviromentally Sustainable Energy Production and Use IR 3.1: Increased Use of Renewable Energy								
1. Newly Installed Capacity - On-Grid	Definition: The installed capacity of new generation facilities using renewable energy that come on-line, providing electricity to national or regional utility grids, as a result of the catalytic role IR3.2's activities are playing. To provide context, 1 MW will provide electric power to a community of about 5,000 residents in a developing country. Unit: Megawatts (MW) of installed capacity	Winrock and its Renewable Energy Project Support Offices (REPSOs), US/ECRE, EEAF, IQC contractors, and MDBs.	Periodic monitoring of/follow-up to programs and projects supported by IR 3.2 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	End of fiscal year	IR Team Leader
2. New renewable energy systems installed - Off-Grid	Definition: Small renewable energy systems, not connected to the utility grid, providing energy services (electricity, heat, etc.) or other services for which energy is necessary intermediary (such as water that needs to be pumped other than by animal power) to households, enterprises, or service centers (health clinics, schools, etc.) Unit: Number of households, businesses, and service centers that benefit from the energy services	Winrock and its Renewable Energy Project Support Offices (REPSOs), US/ECRE, EEAF, IQC contractors, and MDBs.	Periodic monitoring of/follow-up to programs and projects supported by IR 3.2 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	End of fiscal year	IR Team Leader
3. Number of policies adopted / implemented that clearly favor renewable energy	Definition: National, state, and local policy or regulatory reforms that IR3.2 plays an instrumental role in advancing. Results to be monitored may include incentives adopted, subsidies for fossil fuels reduced or eliminated, and improved access laws for renewable energy resources. Unit: Number of policies or sets of regulations adopted and implemented	Winrock and its Renewable Energy Project Support Offices (REPSOs), US/ECRE, EEAF, IQC contractors, and MDBs.	Periodic monitoring of/follow-up to programs and projects supported by IR 3.2 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	End of fiscal year	IR Team Leader

4. Businesses investing in renewable energy and joint ventures formed	Definition: Businesses that, as a result of assistance funded by IR3.2, decide to pursue or increase the pursuit of developing specific renewable energy projects. The USAID assistance itself is not sufficient to be counted, but rather a continuation of pursuit after that assistance. In addition, new businesses or joint ventures that are newly formed with or as a result of IR3.2 activity, with subsequent activity in pursuit of projects, will be counted. Unit: Number of business entities	Winrock and its Renewable Energy Project Support Offices (REPSOs), US/ECRE, EEAF, IQC contractors, and MDBs.	Periodic monitoring of/follow-up to programs and projects supported by IR 3.2 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	End of fiscal year	IR Team Leader
5. New financing explicitly made available for, or committed to, renewable energy projects by the private and public sector	Definition: This indicator tracks three categories of serious financial commitments that are made for renewale energy projects, prior to construction or installation of functioning hardware. (a) approval of loan packages dedicated to renewable energy by the multilateral development banks (public sector), (b) financial closure on specific projects by the private sector (which may include financing from private banks); and (c) obligation of financing for renewable energy technologies by non-MDB public sector entities. The intention of this indicator is to capture serious signals of intermediate success in mobilizing financing for investment. When systems subequently are constructed or installed and are operating, then the data is reflected in the top-level indicators for IR3.2. Unit: U.S. Dollars (millions)	Winrock and its Renewable Energy Project Support Offices (REPSOs), US/ECRE, EEAF, IQC contractors, and MDBs.	Periodic monitoring of/follow-up to programs and projects supported by IR 3.2 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	End of fiscal year	IR Team Leader

6. Host-Country Non-Profit Institutions Established or Strengthened	Definition: New institutions established (for instance, a Renewable Energy Project Support Office) or existing institutions strengthened (by provision of direct funding, technical assistance, or training) explicitly for the purpose of promoting renewable energy. Under IR3.2, each public or private non-profit institution receiving G/ENV assistance will define the result being pursued to strengthen its institutional capacity. To be counted under this target as "strengthened," the targeted result must be reached. Unit: Number of public sector or non-profit NGOs established or strengthened (including on-going strengthening, and thus institutions counted more than once.	Winrock and its Renewable Energy Project Support Offices (REPSOs), US/ECRE, EEAF, IQC contractors, and MDBs.	Periodic monitoring of/follow-up to programs and projects supported by IR 3.2 funding, and monitoring of replications that may occur.	Annual	An IQC contractor will have overall responsibility.	No	End of fiscal year	IR Team Leader

Intermediate Result 3.3

INCREASED PRODUCTION AND USE OF CLEANER ENERGY

Economic growth cannot take place without energy and capital. Thus, as USAID-assisted countries liberalize their economies, the rate of growth of energy production and use will increase **dramatically,** as will pollution, unless steps are taken to mitigate the negative environmental impacts.

Oxford Economic Research Associates (OXERA) estimate that energy production and use will double by the year 2020 and that Asian countries will dominate the world list of leading energy consumers if the current rate of consumption continues. World demand is being propelled by population growth, industrialization, and urbanization. OXERA argues that private sector involvement in the power sector has almost always been beneficial - energy prices were lower, efficiency higher, customer service better, and consumers had more options.

Renewable energy sources and energy efficiency measures offer two options for averting some environmental impacts of fossil fuel production and use, but projections show that fossil fuels will continue to be the main source of energy worldwide for the next century or two. Adoption of cleaner, sustainable, and innovative technologies will be the likely path that countries will take to reduce pollution associated with fossil fuels.

These 'technical' solutions will need to be coupled with appropriate policy frameworks, economic incentives, viable public and private institutions, adequate human resources capabilities, and, last but not least, capital investments. In the long term, improved environmental conditions cannot, and will not, be sustained without the involvement of the private sector on a large scale and the private sector will not usually become involved unless these solutions either make good financial sense or are in response to legal mandates (command and control measures).

Against this backdrop, IR 3.3 strategy will foster private investment in the energy and environmental sectors by facilitating the creation of new sources of financing for investment, assisting with regulatory reform to allow for and encourage private investment, demonstrating the private role in increasing efficiency, and sponsoring seminars to discuss the value of private investment. Examples of activities include: increasing power plant output and efficiency by improving plant maintenance and operations to reduce energy losses in production and transmission; working with governments in developing countries to ease regulatory barriers for private power developers; and creating collaborative efforts involving private firms and municipalities in the development of integrated strategies for the **delivery of environmental** services. Thus, the IR3.3 team will seek to exploit win-win solutions - those where the economy and the environment win and what may be called bottom line enhancing solutions.

Measuring Performance

The IR 3.3 team has adopted ***nine*** indicators, several of which are proxy measures, to gauge progress against the strategic plan. At the highest level three indicators are chosen to gauge the success of the team's interventions: 1) GHG emissions avoided as both a direct result of activities and those catalyzed by G/ENV's activities; 2) the number of cleaner energy activities initiated by the private sector - measuring the penetration of demonstration activities and the creation of incentives or removal of disincentives; and, 3) the estimated reduction in emissions of local or non-GHG pollutants - recognizing that GHG reduction activities often have other benefits and measuring these spillover effects such as increased benefits in health and welfare to local communities.

Four secondary intermediate results (with a total of six indicators) have been chosen that lead to increased cleaner energy production and use. They are:

IR 3.3.1: Increased Cleaner Energy and Policies Adopted and Implemented

Many countries have policies which currently act as disincentives to increased cleaner energy. Examples include below cost pricing, utility operating standards and practices biased against renewable energy and public provision of energy services. In other cases, governments have promulgated clean energy policies but they fail to have any impact since implementing rules and regulations have not been developed. Activities will assist governments in analyzing existing policies, developing new policies and writing enabling rules and regulations. The number of cleaner policies adopted and implemented is the indicator for this IR.

IR 3.3.2: Cleaner Energy Technologies Adopted and Replicated

Non policy barriers often exist to the use of cleaner energy technologies. These might be technical, financial or operational. The success of the demonstration project effect is well known and often is a powerful force to remove or obviate these barriers. It is not enough though that USAID activities demonstrate the feasibility of cleaner energy technologies, they must be replicated to be meaningful on a macro level. Thus the indicator for this intermediate result is the number of cases in which energy efficient technologies are demonstrated and replicated in key sectors, where key sectors include energy production, consumption, and transportation.

IR 3.3.3: Increased Investment in Cleaner Energy

Increased investment in cleaner energy technologies is required if GHG reductions are to have a significant impact and be sustainable. This will be accomplished by leveraging USAID funds. To measure this IR, two indicators are proposed: the value of private and public investment leveraged by G/ENV and the number of partnerships between US and host country business brokered. The latter indicator attempts to measure increased flows of technology and capital from the US to companies in developing countries.

IR 3.3.4: Improved Decision-making and Management by Host Country Institutions

USAID's past experience has shown that for its activities to be successful, host country institutions must be strengthened. Stronger financial, energy and environmental institutions, for example, are better able to understand and implement their role in facilitating the private sector's clean energy activities, understanding the energy-environment nexus, and pursuing win-win policies. To measure this IR two indicators have been chosen: number of host country institutions strengthened and the percent of training alumni reporting use of training content in their work.

These lower level results indicators (the number of institutions strengthened, number of private sector partnerships established, and the number of technical solutions replicated) are good, but not mathematically precise measures of impact. Private sector development requires risk taking, innovation, entrepreneurial approaches and, above all, fast response and flexibility to adapt to constantly changing business circumstances. With this in mind, one must accept that the attached indicators are to a large extent an indication of progress against a targeted plan. Given the fact that perceptions of time scale between private sector development and government planning and evaluation are quite different, and that government tools for measurement are not as well honed as those of the private sector, one should accept a 5 to 10-year horizon for the purpose of evaluating this framework.

Utilization of Indicators

Direct measurement of private sector involvement in cleaner energy production and use resulting from USAID's interventions, in addition to the gains made through involving the private sector, is complex. It requires longterm observation and use of methodologies often outside the capabilities of USAID projects and/or contractors. In its recent report, the World Bank points out that private sector investments usually result in alliances with local stakeholders that bring about spillover effects that are extremely difficult to measure. The World Bank estimates that each percentage point share of direct foreign investment in national,output is associated with an extra 0.3 to 0.4 percent annual economic growth. But, the World Bank argues, it is impossible say whether investments encourage growth or growth encourages investment. Probably both. Similar difficulties are to be encountered in USAID's performance evaluation given that interventions are done in a framework of complex, strongly interrelated economic, political and social events. Quantified indicators more appropriate for production, manufacturing , sales and marketing may provide a proxy gauge but never a simple yardstick when it comes to interpret progress in development assistance of donors. Hard numbers require mathematical uniqueness accompanied by error analysis. Such methodologies are not within the usual donor community capabilities. Consequently, the interpretation of quantitative results must be accepted in the context of necessary but not sufficient gauging tools.

IR 3.3 Increased Cleaner Energy Production and Use

Indicators:

- GHG Emissions Avoided
- Number of Cleaner Energy Activities Initiated by the Private Sector
- Estimated Reduction in Emissions of Local Pollutants

IR 3.3.1 Increased Cleaner Energy Policies Adopted and Implemented

- Number of cleaner policies adopted and implemented

IR 3.3.2 Cleaner Energy Technologies Adopted and Replicated

- Number of cases in which energy efficient technologies are demonstrated and replicated in key sectors

IR 3.3.3 Increased Investment in Cleaner Energy

- Value of private and public investment leveraged by G/ENV
- Number of partnerships between U.S. and host-country businesses brokered

IR 3.3.4 Improved Decision-Making and Management by Host Country Institutions

- Number of host-country institutions strengthened
- Percent of training alumni reporting use of training content in their work

Performance Data Tables IR 3.3 Clean Energy

Result: IR 3.3
Increased Cleaner Energy Production and Use

Indicator 1: GHG Emissions Avoided - (D) direct, (C) catalyzed by partners

Unit of Measure: Metric tons of appropriate GHG

Source: Private Sector Sources, IQC; Host Country Industries and Utilities

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	baseline	NA(*)	0	(D) 2,000 (C) 3,000	(D) 2,000 (C) 3,000	(D) 3,000 (C) 4,500	(D) 3,000 (C) 4,500	(D) 4,000 (C) 6,000	(D) 14,000 (C) 21,000
Actual	(D) 2,350 (C) N/A								

Indicator Description: Tracking IR3.3's contributions to GHG emissions avoided relies on two separate measures to capture the direct and indirect results. While it is impossible to accurately insure GHG emissions, the indicator is a good proxy for the environmental soundness of G/ENV's programs. GHG emissions from fossil fuel generation (including refining and conversion), transmission, distribution, and end use.

Avoided GHG emissions that fall within G/ENV's manageable interests are measured in two ways: (D) emissions avoided by USAID-funded or directly assisted activities; and (C) emissions avoided by projects USAID has catalyzed.

The direct targets are based upon experience gained through activities such as the Manzanillo power plant retrofit and coal Washeries Purchase Agreements. These targets reflect both the time lag involved in demonstrating and replicating investments and the normal bureaucratic process entailed in legislative policy changes. Baseline targets are realistic in light of the gap between initial activities and actual results.

* N/A is used because the IR team did not have any active projects in FY97 that would have materially contributed to this and other targets.

Result: IR 3.3
Increased Cleaner Energy Production and Use

Indicator 2: Number of cleaner energy activities initiated by the private sector

Unit of Measure: Number of activities

Source: IQC; Collaborators; Industry; Cooperators and Stakeholders

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	baseline	N/A	2	2	2	3	3	3	15
Actual	2	N/A							

Indicator Description: This is a "catch-all" indicator allowing the evaluation of any significant direct and indirect activity contributing to IR3.3. It is also a qualitative indicator to recognize the time lags between the beginning of a project and its actual contribution to environmental improvement. For example, if a new coal plant using advanced coal combustion techniques is started in 1999, it may be a full five years before generation begins. Yet, those activities are a result of G/ENV's work and will ultimately contribute to reduced GHG emissions. Other examples include the coal washeries purchase agreements (ETIP) which were carried out in 1995, resulted in formation of on-the-ground projects in 1997, which will be in operation by 1999.

Result: IR 3.3
Increased Cleaner Energy Production and Use

Indicator 3: Estimated reduction in emissions of local pollutants

Unit of Measure: Metric tons of pollutant avoided or abated

Source: Private sector collaborators; Market Data; IQC

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	baseline *particulate matter(PM) *SO2	N/A	700 TBD	1500 TBD	1500 TBD	1900 TBD	1900 TBD	2300 TBD	9800 TBD
Actual	PM 0 SO2 0	N/A							

Indicator Description: Based on the number of demonstration projects initiated, adopted and replicated, this indicator will measure the amount of air, soil, and water pollution reduced or averted. All clean energy activities result in reducing or averting conventional pollutants such as particulate matter, sulfur dioxide, nitrous oxides and ozone if for no other reason than more efficient technologies require less energy input per unit of output and thus every BTU of energy output results in less pollution, including GHG.

Note that a target has not yet been chosen for sulfur dioxide (SO2). This stems from the fact that fuel and combustion characteristics are important determinants of SO2 emissions and in the absence of concrete activities with their associated fuel and combustion characteristics it would be difficult to determine SO2 targets. Once these activities have been more closely identified, a target for SO2 emissions reductions will be determined.

Result: IR 3.3.1
Increased Cleaner Energy Policies Adopted and Implemented

Indicator 1: Number of cleaner energy policies (A) adopted and (I) implemented

Unit of Measure: Number of policies

Source: G/ENV project tracking

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	baseline	0	0	1	1	1	2	2	7
Actual	0	0							

Indicator Description: Indicator tracks the full spectrum of national, state and local policy reforms in which IR3.3 plays an instrumental role in advancing. IR3.3 will track when policies are formally adopted by governmental bodies and when policies are implemented. Results to be monitored from policy reforms may include economic incentives for adoption of cleaner energy or implementation of pollution codes and standards.

Result: IR 3.3.2
Cleaner Energy Technologies Adopted and Replicated

Indicator 1: Number of cases in which energy efficient technologies are (D) demonstrated and (R) replicated in key sectors

Unit of Measure: Number of cases

Source: GENV project tracking; computed on a per project basis

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	baseline	N/A	(D) 1 (R) 1	(D) 1 (R) 2	(D) 2 (R) 2	(D) 2 (R) 4	(D) 3 (R) 4	(D) 3 (R) 6	12 19
Actual	(D) (R)								

Indicator Description: Each cleaner energy program will track the number of cases in which a G/ENV-introduced technology is demonstrated in a key sector, and then replicated by partners. Key sectors where technology will be tracked include power generation, transportation and methane utilization.

Result: IR 3.3.3
Increased Investment in Cleaner Energy

Indicator 1: Number of partnerships between U.S. and host-country businesses brokered

Unit of Measure: Number of partnerships

Source: Private Sector Collaborators; Market Data; IQC

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	baseline	N/A	3	1	1	2	2	3	11
Actual	2								

Indicator Description: Engaging the private sector in cleaner energy production and use will require U.S. and host-country partnerships for financial resources and technical assistance to be transferred to key country institutions. This indicator will track the number of partnerships between these entities that are successfully brokered by G/ENV.

Result: IR 3.3.3
Increased Investment in Cleaner Energy

Indicator 2: Value of private and public investment leveraged by G/ENV

Unit of Measure: U.S. Dollars (millions)

Source: IQC; Collaborators; Industry; Cooperators and Stakeholders

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	baseline	N/A	5	10	10	15	15	20	75
Actual	23.3								

Indicator Description: Mobilizing investments and engaging partner participation, especially the private sector, in cleaner energy production and use is the highest result IR3.3 is pursuing. Strong private sector collaboration bodes well for the sustainability of G/ENV's programs, since cleaner energy provision is a highly commercial activity. Only private capital markets can command the financial resources needed to increase world energy supply to meet the growing demand, and only the incentives that drive private sector profitability can help ensure cleaner energy.

Monitoring of private investment (and if appropriate public counter investments) may include equity, stock exchange and conventional investment instruments.

Result: IR 3.3.4
Improved Decision-Making and Management by Host Country Institutions

Indicator 1: Number of host country institutions strengthened

Unit of Measure: Number of electric utilities, government agencies, businesses

Source: GENV project tracking; computed on a per project basis

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	baseline	N/A	2	2	2	3	3	4	16
Actual	2								

Indicator Description: As energy institutions shift from centrally planned to market economies, new tools for planning, analysis, regulation, and training are necessary to facilitate this transition. Under IR3.3, each public or private institution receiving G/ENV assistance will define the result being pursued to strengthen its institutional capacity. To be counted under this indicator, the targeted result must be reached.

Result: IR 3.3.4
Improved Decision-Making and Management by Host Country Institutions

Indicator 2: Percent of training alumni reporting use of training content in their work

Unit of Measure: Percent

Source: G/ENV survey

Year	1996	1997	1998	1999	2000	2001	2002	2003	Total
Target	baseline	N/A	2.5	5	7.5	10	12.5	15	15
Actual									

Indicator Description: This indicator is based on a survey of program graduates, and is intended to capture the degree to which participants are able to use the program content to promote and/or implement IR3.3-type activities. Tracking of this indicator will be conducted periodically on an as needed basis.

Performance Monitoring Plan
IR 3.3

PERFORMANCE INDICATOR	INDICATOR DEFINITION AND UNIT OF MEASUREMENT	DATA SOURCE	METHOD/ APPROACH OF DATE COLLECTION	DATA ACQUISITION BY G/ENV		DATA REGULARLY AVAILABLE AT G/ENV?	ANALYSIS & REPORTING	
				SCHEDULE/ FREQUENCY	RESPONSIBLE CONTRACTOR/ COOPERATOR		DEADLINE FOR REPORTING	RESPONSIBLE TEAM
SSO 3: Increased, Enviromentally Sustainable Energy Production and Use IR 3.1: Increased Production and Use of Clean Energy								
1. GHG Emissions Avoided	Definition: The effect of intervention will be appropriately "translated" as a reduction in GHG emissions from a baseline. In other words, these interventions will reduce the growth path of GHG emissions below what they would be in the without activity scenario. Unit: Metric Tons of relevant GHG emissions.	IQC contractor, collaborators, host country utilities	Continuous monitoring of project work with collaborators	Annual	IQC Contractors and Collaborators	No	End of Fiscal Year	IR Team Leader
2. Number of cleaner energy activities initiated by the private sector through G/ENV assistance	Definition: Environmental policies, technology evaluation and/or deployment, improved processes and methodologies Unit: Numerical	IQC contractor, collaborators, host country utilities	Continuous monitoring of project work with collaborators	Annual	IQC Contractors and Collaborators	No	End of Fiscal Year	IR Team Leader
3. Estimated reduction in emissions of local pollutants	Definition: Standards for air, soil, and water pollution under consideration Unit: ppm metric tons, relative and absolute concentration	Private sector collaborators, indirect market data, IQC contractors	Standard engineering methodologies depending on application	Annual	IQC Contractors and Collaborators	No	End of Fiscal Year	IR Team Leader

4. Number of cleaner energy policies adopted and implemented	Definition: Environmental/clean energy policies, rules and regulations analyzed, promulgated and implemented Unit: Numerical	IQC contractor, collaborators, host country institutions	Project monitoring, government publications, industry estimates	Annual	IQC Contractors and Collaborators	No	End of Fiscal Year	IR Team Leader
5. Number of cases in which energy efficient technologies are demonstrated and replicated in key sectors	Definition: Successful intervention requires that GHG-reducing technologies and new approaches and/or processes be domonstrated and that they be replicated. This indicator tracks both the number of demonstration activities and the number of demonstration activities which are adopted or replicated. Unit: Numerical	Private sector collaborators; indirect market data; IQC contractors	Direct project involvement; sector and sub-sector analysis for indirect results	Annual	IQC Contractors and Collaborators	No	End of Fiscal Year	IR Team Leader
6. Value of private and public investment leveraged by G/ENV	Definition: USAID's funds are limited and to be successful in making a major contribution to GHG reduction these funds must be leveraged by additional public sector and/or private sector investment. This indicator measures the value of investment which results or is related to G/ENV activities. Unit: U.S. Dollars (millions)	IQC contractor, collaborators, host country institutions	Project monitoring; industry estimates; information from collaborators	Annual	IQC Contractors and Collaborators	No	End of Fiscal Year	IR Team Leader
7. Number of partnerships between U.S. and host country businesses brokered	Definition: A partnership is a formal agreement between two or more entities to participate together in a business venture. This indicator will track the number of partnerships which are actually brokered by or formed as a direct result of IR3.3-supported activities. Unit: Numerical	Private sector collaborators; indirect market data; IQC contractors	Direct involvement in brokering; market follow-up for indirect partnerships	Annual	IQC Contractors and Collaborators	No	End of Fiscal Year	IR Team Leader

8. Number of host country institutions strengthened	Definition: To make a lasting, sustainable contribution to GHG reduction, host country institutions must be strengthened. In many institutions this calls for new tools in policy reforms, regulation, and law, and the capability to use new models and methodologies. This indicator will monitor the number of institutions which have been strengthened, with these new tools. Unit: Numerical	IQC contractors and collaborative entities	Project monitoring	Annual	IQC Contractors and Collaborators	No	End of Fiscal Year	IR Team Leader
9. Percent of training alumni reporting use of training content in their work	Definition: This indicator is intended to capture the degree to which participants are able to use their IR 3.3-supported energy efficiency training Unit: Percent	IQC contractor, collaborators, host country institutions	Surveys	Annual	IQC Contractors and Collaborators	No	End of Fiscal Year	IR Team Leader