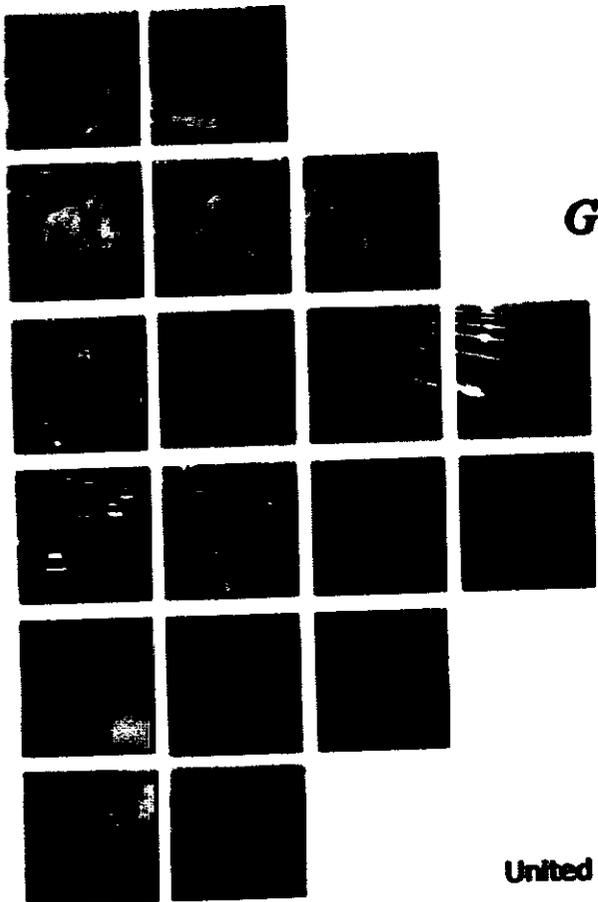


IN-AC4-772

**CLIN 6: Policy Level Exchange Visits between  
U.S. and Indian Counterparts**

*Subtask 6.C Completion of Study Tour and Exchanges for  
Milestone C - for all CLINS + 1 Policy Exchange*



***Greenhouse Gas Pollution  
Prevention Project -  
Climate Change  
Supplement***

A Program of the:   
United States Agency for International  
Development / India Mission

Implemented by:   
The Louis Berger Group, Inc.  
Global Environment Team



**ESTABLISHING GHG EMISSION BASELINE MEASUREMENTS FOR  
THE FUTURE: STUDY TOUR DELEGATION**

Washington, D.C. • San Francisco, CA

*June 3-7, 2002*

B



THE Louis Berger Group, INC.

---

2300 N Street, NW  
Washington, DC 20037 USA

***The Louis Berger Group, Inc***  
***Contract No. 386-C-00-00-00058-00***  
***Sandeep Tandon, CTO***

## TABLE OF CONTENTS

### PART A

EXECUTIVE SUMMARY.....	3
BACKGROUND ON STUDY TOUR APPROACH.....	6
OBJECTIVES.....	6
OUTCOMES.....	6
STUDY TOUR PARTICIPANTS.....	7
U.S.STUDY TOUR SCHEDULE.....	8
U.S. STUDY TOUR SCHEDULE.....	8
OVERVIEW OF MEETING SCHEDULE.....	9
FOLLOW-UP AND NEXT STEPS.....	25
STUDY TOUR CONTACT INFORMATION (ANNEX A).....	27
SUMMARY OF EVALUATION (ANNEX B).....	30

### PART B

POLICY EXCHANGE ON GHG PROTOCOL.....	31
EXECUTIVE SUMMARY.....	32
BACKGROUND ON POLICY EXCHANGE APPROACH.....	34
OBJECTIVES.....	34
OUTCOMES.....	34
REPRESENTATIVE POLICY EXCHANGE PARTICIPANTS .....	34
POLICY EXCHANGE VISIT SCHEDULE .....	35
OVERVIEW AND PROCEEDINGS OF THE POLICY EXCHANGE VISIT.....	35
FOLLOW-UP AND NEXT STEPS.....	41
ROUNDTABLE PARTICIPANT LIST (ANNEX A).....	43
PANKAJ BHATIA BIO INFORMATION (ANNEX B).....	46

## EXECUTIVE SUMMARY

As international climate change negotiations evolve, the fact remains that countries across the world continue to generate and emit greenhouse gas emissions at the highest levels. In India, industry associations have long supported the charter to work toward establishing a clean, sustainable environment while ensuring industrial productivity. This goal of sustainability has simultaneously been challenged by demand for energy supply in India. In recent years, Indian industries have addressed these challenges and issues with the development of clean energy projects primarily in the areas of energy efficiency, and renewable energy. This proactive stance by industry has set the course and is the first step toward reducing the rate of GHGs in India. The industrial measures taken have been found to enhance the bottomline efficiencies of organizations, while playing an integral role in improving the environment and the urban air quality. The advancements made have also resulted in a new realm of technological innovations, which, in turn, have raised the bar on the level of performance and efficiency within industry. With the project development process evolving in India, it is clear that an opportunity has emerged to support these advancements and to continue to strengthen the institutional capacity of the "champion" organizations and associations. In absence of formal international guidance or standards, institutions around the globe have been "leading the charge" in developing integrated tools, measurement models, and verification protocols to assist companies and industries to reduce GHG. A dilemma has arisen, however with the proliferation of technologies and models those have emerged across industrial sectors. To lower transaction cost, broad range sectoral guidelines or standards will be necessary to lower these transactions costs.

Under the GEP-CCS program, LBG has been providing ongoing technical assistance to project developers and institutions on operationalizing the key components of the clean energy project cycle. In support of this work, and to address the needs of progressive industry leaders, LBG/GEP-CCS designed a U.S. study tour to focus on the process of establishing baseline methodologies, entitled *Establishing GHG Emission Baseline Measurements for the Future*. The goal was to identify the key technical, accounting, measurement issues associated with GHG reduction projects. The tour was designed to ensure a variety of models at the project, state, national level were examined, as well as approaches, methodologies utilized in lack of formal accounting guidance on GHG emissions. Furthermore, we wanted to provide the delegation a set of tools or resources that could be used that would assist them in their GHG emissions reduction management strategies / projects, upon returning to India.

The U.S. Study Tour was held from June 3-7, 2002, with meetings organized, in Washington, D.C. and San Francisco, CA. The delegation structure was designed to ensure all of the energy intensive industry sectors would be represented, e.g. Steel, Cement, Aluminum, Chemicals, Pulp/Paper. In addition, GEP-CCS solicited the attendance from both prominent industrial associations, Confederation of Indian Industries and Federation of Indian Chamber of Commerce and Industry attended the tour. It was essential that these two associations were represented as their combined industry coverage/membership represents a significant portion of the entire Indian industry. These associations will play a pivotal role in the future for advancing industrial growth down a path of cleaner production and technologies.

The meetings began in Washington D.C. with an examination of different baseline methodologies that had been devised in various regions around the world, under USAID/Washington D.C. The group was exposed to work currently being implemented in Mexico, Caribbean and South America.

These models also provided an analysis of the strengths and weaknesses of approaches done on a country or regional level.

The World Bank's Prototype Carbon Fund (PCF) provided a donor-agency model and an understanding of a "market stimulus program" that can assist in driving the market. The downside of this model is that the process can incur a large transaction cost for the developer. The Environmental Resources Trust (ERT) is a comprehensive and quite rigorous model/process of measuring and quantifying emissions. This process can ensure credible and reliable information "paper trail" has been formed and will ensure a sound market place for members.

To outline a range of the energy opportunities and strategies available, the delegation met with the National Association of State Energy Officials (NASEO). NASEO provided a comprehensive overview of their combined energy and emission reduction program that stresses the need for cost-effective energy approaches while promoting the reduction in GHG emissions.

The delegation expressed their interest with the information that was presented and background information and case studies provided. Such tools as the World Resources Institute (WRI) GHG Protocol and the Lawrence Berkeley National Laboratories (LBNL, a USDOE Lab) ProForm Software will provide invaluable, long-term, sustainable resources for the industrial members to further their own programs and establish the foundation for programs in the future.

The Environmental Defense session provided a "reality check" in a "real results - real case studies" approach for corporate GHG Target Setting. In conjunction with this session, an overview of the development of market based mechanisms and emissions markets around the globe was examined. This information will be valuable in coming years in anticipating evolving markets and technologies.

LBG/GEP-CCS was encouraged by the active participation from the entire study tour group and will continue to provide follow-up and facilitation with the delegation and with the institutions met in the U.S. Specifically, expressed interest for continuing partnerships included:

- World Resources Institute - *The GHG Protocol*
- Environmental Defense - *Emissions Market/Partnership for Climate Action*
- Lawrence Berkeley National Lab - *ProForm Software, Industrial Energy Analysis*
- California Energy Commission - *Global Climate Change Programs*

As the UNFCCC path of progress leads to New Delhi, India in the fall of 2002, industry has been given an opportunity to work closely with the respective Gov ministries in providing representative models and approaches. Increased interaction and constructive dialogue will hopefully translate into initiatives that will ensure a balance of industrial, climate and environmentally friendly policy initiatives. Mr. Nyati, speaking on behalf of his membership during the World Resources Institute Session, noted that:

*"Regardless of an emissions cap, a regulatory framework, and an emerging emissions market, Indian industry will continue to seek innovative solutions that will protect the environment and ensure sustainable development..... the world of business is interwoven with the elements of environment and only a fine balance of both will ensure long-term viability!"*

*- Mr. K.P Nyati, Head, Environmental Management Division, CII*

As an overall finding from the U.S. Study tour, it is clear that there are two issues that the delegation will need to continue to examine closely as they further there specific initiatives for GHG emissions reductions:

- **How and Can Additionality be Defined for a Project? For India?**
- **Implications of a Project Specific or Sectoral Based Baseline Methodologies for a Project ?**

## I. BACKGROUND ON STUDY TOUR APPROACH

Today, a key issue in the world of climate change mitigation through mitigation project development is that of project baselines. The international climate change community continues to grapple with appropriate approaches to baseline development, as any one approach has significant and multiple implications for a project, region, government, investors, etc. This study tour is being designed as a mechanism for eminent US institutions involved in climate change and key climate change interests in India, namely industry associations and industry representatives, to exchange information, ideas, tools, and approaches for baseline development. The goal is that both Indian stakeholders and US would benefit from the exchange and that the information shared would support and enhance GOI policy formulation and industry strategies and approaches to mitigation project development. LBG would provide the platform for this exchange and further utilize the outcomes to promote strategic objectives under GEP-CCS.

## II. OBJECTIVES

To implement a study tour that will provide the delegates an increased understanding to:

- Understand existing approaches and methodologies to establishing baselines on a Project, Sector, State, or National level.
- Identify the key technical, and measurement challenges related with establishing baselines for climate change mitigation projects (CCMP).
- To become familiar with innovative tools to calculate, account and assess GHG Emissions intensity.

## III. OUTCOMES

- Support towards establishing and enhancing credible and systematic GHG emission baseline guidelines relevant to all types of projects in India.
- Outline specific guidance tailored to project categories and transparency for the Indian scenario.
- Facilitate partnerships with US institutions with whom Indian stakeholders can form an informal network on related climate change issues.
- Provide inputs for key Indian stakeholder activities in the run-up to COP-8 in October, 2002.

#### IV. STUDY TOUR PARTICIPANTS

- **Mr. K.P. Nyati**  
*Director – Environmental Management Division  
Confederation of Indian Industries*
  
- **Mr. M.A.J. Jeyaseelan**  
*Executive Director – Environmental Business Information Services Network  
Federation of Indian Chamber of Commerce and Industry*
  
- **Mr. R.P. Sharma**  
*Senior Divisional Manager  
Tata Steel*
  
- **Mr. Y.K. Saxena**  
*General Manager  
Gujarat Ambuja Cement*
  
- **Mr. Mihir Moitra**  
*General Manager – Research  
Hindalco Industries, Ltd.*
  
- **Mr. A.K. Ghose**  
*Vice President – Environment  
Vam Organosys, Ltd.*
  
- **Dr. H.D. Kulkarni**  
*Chief Manager – Research and Development  
ITC, Ltd.*
  
- **Mr. S.K. Bezbaroa**  
*Environmental Specialist  
Corporate – Environment, Health and Safety*
  
- **Mr. Samrat Sengupta**  
*Technical Manager  
Society of Development Alternatives*
  
- **Dr. Vivek Kumar**  
*Technical Manager  
Society of Development Alternatives*

## V. U.S. STUDY TOUR SCHEDULE

### Washington, D.C.

#### *Monday, June 3, 2002*

- Welcome Breakfast / Introductory Session
- U.S. Agency for International Development / Washington Roundtable – *Overview of USAID sponsored International Baseline Projects*
- The World Bank Group – *Prototype Carbon Fund*

#### *Tuesday, June 4, 2002*

- Environmental Resources Trust – *GHG Registry Program*
- National Association of State Energy Officials – *Combined Energy and Environment Strategy*
- U.S. Environment Protection Agency – *Climate Leaders Program*

#### *Wednesday, June 5, 2002*

- World Resources Institute – *The GHG Protocol Initiative*

### San Francisco, CA

#### *Thursday, June 6, 2002*

- Environmental Defense – *Partnership for Climate Action*
- Lawrence Berkeley National Laboratories – *US Department of Energy Lab*

#### *Friday, June 7, 2002*

- California Energy Commission – *New California Climate Action Registry Program*

## VI. OVERVIEW OF MEETING SCHEDULE

WASHINGTON, D.C.  
JUNE 3-5, 2002

*Monday, June 3, 2002*

### **Welcome Breakfast / Introductory Session**

- Mr. Fred Berger, Senior Vice President, LBG Worldwide Operations
- Ms. Julie Haines, Vice President, Global Environment Team
- Mr. Ted Yoder, Manager, Trade Finance Unit
- Mr. Erik Brejla, U.S. Program Manager, GEP-CCS Project Washington D.C.

### **Background**

The Louis Berger Group, Inc. hosted the study tour delegation to a Welcome Breakfast and Introductory Session. Mr. Fred Berger provided an overview of The Louis Berger Group's Worldwide Operation, while Ms. Julie Haines introduced the delegation to the GET Division and the GEP-CCS program. Mr. Ted Yoder gave an introduction to baseline methodological approaches and examined the intricate elements of: emission rates, project analysis, project boundaries and additionality.

Mr. Erik Brejla presented and reviewed the schedule for the overall study tour visit, provided additional background information on institutions and answered all outstanding program and/or logistical questions. The morning session provided the delegates an opportunity to discuss, as a group, those key points, issues that they would like to focus on during the tour.

### **Meeting Notes**

Upon being walked through the study tour and being briefed on the fundamental elements of establishing a baseline protocol, the session focused on identified group interests and specific needs that they wanted to fulfill during the week long session. Mr. Nyati, representing the group as Team Leader, outlined six fundamental areas the group expressed interest in exploring:

1. Understanding the operational entities – Monitoring and Certification of Emissions
2. CDM Reality – What is and how to address the additionality? What is “business as usual”
3. What are the project tests? Financial, Technology
4. Who is setting the market and how? Buyer vs. Seller Dilemma
5. What are the corporate tax implications or incentives for CCMP Projects?
6. Defining the role of key stakeholders in the project development process?

Mr. Jeyaseelan and Mr. Bezbaroa emphasized that the tour would need to provide “hands-on” models of integrating approaches to leverage business opportunities, to ensure an engaged upper management on these issues.

Mr. Brejla emphasized that throughout the tour the delegation would be exposed to different models for determining a project baseline and that it would be critical for delegates to strategize together on how a hybrid model could be formulated. Further, it was noted that there was no "one size fits all" model for industry and that a tailored approach would be necessary.

**U.S. Agency for International Development / Washington Roundtable**  
*Overview of USAID sponsored International Baseline Projects*

- Ms. Virginia Gorseveki, USAID Global Climate Change Team
- Ms. Karen Lawson, Center for Clean Air Policy
- Dr. Sandra Brown, Winrock
- Mr. Mark Oven, PA Consulting

**Background**

The United States Agency for International Development is currently funding several innovative programs across the world that address the measurement issues associated with baseline methodologies. During this forum, USAID/WDC, and their partners, provided an overview of the current, leading research that is evolving around examining the key technical, accounting and measurement challenges in setting baselines for GHG reduction projects. These presentations were guided by series of case study examples from Mexico, Caribbean and South America.

**Meeting Notes**

Country Analysis: Mexico Case Study

Mr. Mark Oven, PA Consulting, discussed the baseline work they are currently working on in Mexico, the Aplicacion Energetica (ATPAE) Program. The program was designed to address the lack of a standard approach to determine the GHG emission reductions resulting from energy efficiency and renewable energy projects in Mexico. The result of the work has led to providing formal recommendations to the Government of Mexico (GOM) for the eventual formulation of country-level standards.

Mr. Sengupta's posed a question that focused on the attributes of future standards and if they would be designed to ensure regulatory compliance and/or future trading. Mr. Oven said that ATPAEs proposal to the GOM has the potential for influencing how Mexico fares in the emerging GHG market for GHG credit.

The Mexico model was designed to use a systems average approach. The simplest of all approaches is to: take the weighted average emissions rate of all current operating electricity plants in Mexico or specific regions, because the data is readily available. In this approach it is required to take an average of all units; average excluding known base load; Time-of-use-average; Regional Averages.

In response to a question on the types of projects this baseline would be effective for, Mr. Oven indicated that the baseline could be applicable for:

- Base load DSM
- Load shifting DSM
- Intermittent Supply
- Base load or Dispatchable supply
- Supply-side efficiency
- Off-Grid Supply
- Cogeneration

Regional-Analysis: Caribbean Case Study

Ms. Karen Lawson, Center for Clean Air Policy, provided an overview of work undergoing in the Caribbean on baseline development and assessing GHG emissions. The goal of the program is to develop regional capacity to estimate emissions. The ultimate aim of the program is to develop competitiveness in the Caribbean carbon market and attract investment.

Mr. Sharma inquired about the specific elements of the study in the Caribbean and if it expanded upon the average rate of additions. The study also examined the average emissions rates of planned facilities and average rate of recently retrofitted facilities.

Ms. Lawson said that among obstacles encountered on the project, were seemingly inconsistent management records from electrical generating organizations. To counter these these difficulties the program conducted an industrial benchmarking exercise.

The delegation felt that a general, sectoral baseline might prove invaluable for Indian industry, as the sector base guidelines would bring down the transaction cost of implementation.

**The World Bank Group**

*Prototype Carbon Fund*

- Mr. Chandra Sekhar Sinha, Senior Economist

**Background**

Recognizing that global warming will have the most impact on its borrowing client countries, on July 20th, 1999 the Executive Directors of the World Bank approved the establishment of the Prototype Carbon Fund (PCF). The PCF, with the operational objective of mitigating climate change, aspires to promote the Bank's tenet of sustainable development, to demonstrate the possibilities of public-private partnerships, and to offer a "learning-by-doing" opportunity to its stakeholders.

The PCF is intended to invest in projects that will produce high quality greenhouse gas emission reductions that could be registered with the United Nations Framework Convention on Climate Change (UNFCCC) for the purposes of the Kyoto Protocol. To increase the likelihood that the reductions will be recognized by the Parties to the UNFCCC, independent experts will follow validation, verification and certification procedures that respond to UNFCCC rules as they develop.

By transacting the business of reducing emissions, the PCF will, in turn, develop a major knowledge base. The PCF will maximize the value of its experience by collecting, analyzing, and disseminating information and knowledge to NGOs, governments, private sector interests, and any other stakeholders involved in the climate change negotiations.

Finally, PCF resources will be provided by both the public and private sectors. The PCF aims to demonstrate how insights and experience from both sectors can be pooled to mobilize additional resources for sustainable development and address global environmental concerns. The active participation of both sectors ensures that the PCF will operate efficiently while serving the interests of World Bank client countries.

Research undertaken by the World Bank has suggested two main methods for project-specific baselines, namely an investment approach and a control group approach. Both methods have been used in similar circumstances, for instance to determine incremental cost for GEF projects and to determine electricity savings in demand side management programs in the United States. Several standard-oriented methods are being discussed, e.g., performance benchmarks, reference technologies, baseline defaults, and sectoral (or top-down) baselines. These methods are likely to be less accurate at the project level, but would attempt to reflect actual reductions on average. Standard baselines would have to be developed and agreed upon by the Parties before they can be used for concrete projects. However, it may be possible to interpret certain articles (6 and 12) the World Bank methods of permitting a "Sector" to be regarded as a project for the purpose of establishing a baseline for that sector. Bearing this possible interpretation in mind, the Prototype Carbon Fund (PCF) will explore means by which, through its operations, it can illuminate the practicalities of this approach.

#### Meeting Notes

Mr. Skehar explained that the World Bank's (WB) ProtoType Carbon Fund (PCF) has been designed to ensure flexibility in a baseline methodology structure. WB would like to provide a range of replicable models to the UNFCCC for consideration when they, and the future CDM Executive Board, design specific emission market trading guidelines. It was discussed that by providing a well documented plan for establishing a monitoring and verification plan, in association with a systematic baseline methodology, that these measures would ensure recognition and limited revision/adjustment for years to come.

Mr. Jeyaseelan felt that as a flexibility methodology will ensure creativity and innovation for baseline work, this could foster an element of concern with the prospective buyers and project developers as this approach could lend higher financial risk due to potentially less accurate project information.

The delegation was keenly interested in understanding the application process and cost associated undergoing the define PCF process. It was explained that the cost should be viewed as a project lifetime investment and will average around US\$600,000. The costs include adhering to the PCF print guidelines, establishment of baseline methodology, defining the monitoring and validation, verification, and certification process.

Mr. Nyati pointed out that the price of carbon quoted as an average \$3-15, seemed a bit inflated and was unrealistic with the overall marketplace. Mr. Sekhar explained that, the prices are calculated to identify quality and sound projects. Prices are negotiated on a project basis and are not dependent on past PCF trends. WB felt that there would be no effect on the new world market without the US Gov't. participating in the process.

*It was noted that the PCF should be viewed as one partner in the project development process, with a special market niche in purchasing the CERs and not financing an entire project. A prospective project must reach financial closure only before the World Bank will consider a carbon reduction purchase.*

Tuesday, June 4, 2002

**Environmental Resources Trust**  
*GHG Registry Program*

- Mr. Wiley Barbour, Director of Registry Services

**Background**

ERT pioneers the use of market forces to protect and improve the global environment. Founded in 1996, with the help of Environmental Defense, ERT focuses exclusively on building markets that encourage private parties to serve their own best interests and the best interests of the environment. ERT has three principal programs: the GHG Registry<sup>SM</sup> which records validated greenhouse gas ("GHG") emissions profiles to help create a market that will enable efficient emissions reductions; the EcoPower<sup>SM</sup> Program which catalyzes the market for clean energy by substantiating and marketing blocks of power that include new renewable sources of energy and have significantly reduced environmental impacts; ERT's EcoLands<sup>SM</sup> Program which enables and encourages landowners to make environmentally beneficial land use decisions.

The GHG Registry<sup>SM</sup> records validated greenhouse gas ("GHG") emissions profiles to help create a market that will enable efficient emissions reductions, by working with private and public entities, ERT is developing a common currency in tradable GHG emissions reductions, supported by standardized measurement and verification protocols. The GHG Registry<sup>SM</sup> provides an independent verification and tracking service that enables market participants to track and trade emissions reductions with confidence. ERT believes that the emissions trading system its GHG Registry<sup>SM</sup> is enabling will be a powerful tool in reducing global greenhouse gas emissions without crippling economic growth and development.

**Meeting Notes**

Mr. Wiley Barbour provided an extensive background and overview of the inter-workings of the GHG registry program. Mr. Barbour discussed at length the process they have created and developed for the measurement, verification, and recoding standards and agreements for GHG emissions.

CII and FICCI were interested in the size of the listings with ERT and the relative market for the emissions. It was explained that ERT currently has verified and registered over 100 million metric tons of CO<sub>2</sub> equivalent, including more than 21 million in actual reductions. ERT has found the market for trading credits to be negotiated on a project basis, but trades have ranged from .35 to \$6.00 per CO<sub>2</sub> ton. Mr. Nyati and Jeyaseelan were also interested, from an institutional view point, in designing a systematic recording process, but unsure of specific transaction costs that would be associated with the system. ERT provides services to members on a fee-for-service basis, similar to a consulting firm. The companies that have registered pay a one time US\$15,000 fee, which covers operational and administration cost for the registry.

The Indian Corporations were impressed with the rigorous process of verification that ERT has established for institutions. ERT ensures that this systematic process and the intervention of a Third-party Verifier are critical to ensure creditability, transparency and fungibility. The end goal is to verify emissions inventory and/or corporate/project reductions. Mr. Saxena expressed concern for the associate cost of long-term monitoring. Mr. Barbour explained that if a corporate is able to outline a specific M&V reporting criteria in the beginning this should provide an integrated and systematic, but simplified approach for the future reporting.

Within the GHG Registry system a year-by year review is done on emissions performance and in denominations of the serialized metric tons of CO<sub>2</sub>. The formula used is:

$$\text{Emissions Reductions} = \text{Updated baseline} - \text{actual emissions.}$$

While the registry approach seeks to reduce transaction costs, Mr. A.K. Ghose was interested in what these transaction cost compromise from a corporate viewpoint. Mr. Barbour explained that these costs are associated with investigation ( defining ownership of emissions), contracting and future transfer

#### **National Association of State Energy Officials**

- Mr. David Terry, Managing Director

#### **Background**

The National Association of State Energy Officials NASEO is nonprofit association was created by the governors to improve the effectiveness and quality of state energy programs and policies, and to be a collector and repository of energy-related information. NASEO meetings and communications offer a forum for energy officials, policymakers and others to exchange information and discuss issues with regional and national implications. Issues of concern to NASEO include electric and gas utility, transportation, buildings, research, economic development, environmental, energy efficiency, renewable energy and other energy-related matters. NASEO has provided leadership on these issues as energy's Washington voice - guiding regional, state and federal government officials toward a deeper understanding of energy's pivotal role in the economy and environment, and informing them about the specific energy priorities and concerns of the states and territories. Affiliated with the National Governors' Association, NASEO members are officials from the State and Territory Energy Offices and affiliates from the private and public sectors.

NASEO is leading an effort to promote the adoption of state-based programs that deliver both cost-effective energy savings and emissions reductions-combined energy and environmental programs. For many years, state energy and environmental officials have operated programs that are, in part, isolated from one another. NASEO and other leading state-based organizations saw an opportunity to promote programs that both meet federal emissions reduction targets and deliver cost-effective energy efficiency and renewable energy options. NASEO's efforts to date have focused in two areas: 1) improving the communications and understanding of these complex issues for both energy and air officials; and 2) assisting in the implementation of pilot program efforts in select states.

#### **Meeting Notes**

The NASEO model/strategy to promote emissions reduction programs was driven by a need to reduce cost. State Energy officials compete nationally over a pool of federal funds to implement statewide programs. As these funds are limited, officials continue to devise programs that are cost-effective for energy savings and while seeking emission reductions. NASEO is currently overseeing 11 projects being implemented in 5 States in the U.S.

Mr. Nyati was impressed with the role that NASEO plays, in terms of integrating both state and local government approaches in how they think about, make informed decisions, and formulate policies on energy and environment issues.

Mr. Terry explained that NASEOs role is to create frameworks for working together on energy, environment and transportation issues through a series of meetings, workshops and projects.

Mr. Nyati and Mr. Jeyaseelan both mentioned that they have played a similar role in India and expressed that this needs to be expanded to ensure policy initiatives are implemented. Mr. Sharma and other corporate delegates felt that they should be playing a key role, on the corporate side, in strengthening the Indian State Electricity Boards (SEB). Mr. Bezbaroa commented that the grave mismanagement and inefficiencies and loss of Rs. at the SEBs is then merely passed along to Industry. The group discussed that a commitment by industry would provide co-benefits by all parties involved.

Mr. Terry explained that in the past NASEO has played a key role in working with emerging markets through a *Peer Exchange Program* they have operated with USDOE funding. The program has sent senior state energy officials overseas to provide hands-on TA and assistance to their counterparts. The program has been designed to work with focused markets and thematic issues to ensure continuity. Mr. Terry, as well as the entire group, agreed to further explore the possibility of an exchange visit to the U.S. CII, FICCI, and ITC expressed support in bringing together key GoI officials to participate in the process. They feel the combined strategy of energy and environment programs is consistent with MOPs 10 year policy to rapidly expand without degrading the environment in a sustainable growth approach.

Mr. Kumar and Mr. Sengupta were interested in the role NASEO plays as an information center. NASEO serves as a clearinghouse of information on emerging issues, technologies and also case studies from across the U.S. NASEO will, in the future, also design a database to keep a serialized listing of the inventory of emissions from state members.

#### **U.S. Environmental Protection Agency**

##### *Climate Leaders Program*

- Ms. Cynthia Cummis, Director
- Ms. Heather Tansey, Program Analyst
- Mr. Vincent Camobreco, Program Analyst

#### **Background**

Climate Leaders is a new voluntary EPA industry-government partnership that encourages companies to develop long-term comprehensive climate change strategies. Partners set a corporate-wide greenhouse gas (GHG) reduction goal and inventory their emissions to measure progress towards their goal. By reporting inventory data to EPA, partners create a lasting record of their accomplishments, identify themselves as corporate environmental leaders, and strategically position themselves as climate change policy continues to unfold.

Many corporations are already making great strides in reducing their greenhouse gas emissions through participation in EPA voluntary programs. For these companies, Climate Leaders can serve as a coordinating umbrella to comprehensively manage their voluntary climate change activities. For instance, Climate Leaders may already be working with ENERGY STAR® to improve the energy efficiency of their operations, with the Green Power Partnership to purchase renewable energy, or with WasteWise to better manage their solid waste. The GHG reductions achieved through these activities will be reflected in a Climate Leaders' GHG inventory and count towards the company's GHG reduction goal.

### Meeting Notes

Ms. Cummis provided an extensive overview of the program and discussed how the program will work with industry leaders over the next 10 years to establish corporate GHG reduction targets. The program aims to cut GHG intensity by 18% over the next 10 years. The program will seek opportunities for members to create tax incentives for renewable and cogeneration technologies.

Mr. Sharma expressed that too stringent reporting criteria might deter specific corporations from adopting the program, but accepted that the programs still needs principle elements, e.g. flexibility vs. ensure credible and verifiable emissions.

Mr. Saxena was interested in the intricacies of a member pledge to the program. Ms. Cummis explained that the participating corporations commit to a corporate-wide reduction pledge over the next 5-10 years. The pledge must be considered aggressive for industry and companies will be committed to report the following:

- 6 major greenhouse gases
- Direct Emissions (process related, waste, onsite fuel consumption)
- Indirect emissions (from energy use)

The delegation questioned how the reporting process could be reflected in a trading market. Mr. Cambreco explained that institutions will not be provided a baseline protection, however they would have created the foundation to be better positioned for trading, as requirements will vary by broker or buyer.

Mr. Nyati and Mr. Jeyaseelan noted that for an Indian context, such a program would need to have strong drivers for industry to participate, as voluntary programs without Government recognition would not be incentive based in India. However, in an Indian model you might have an Indian Industry Association play the role of providing TA to industry and design benefits, while developing GHG reduction targets and possibly maintaining an inventory. These services could be deemed as part of their broader "Menu of Services".

*Wednesday, June 5, 2002*

### World Resources Institute *The GHG Protocol Initiative*

- Mr. Jonathan Lash, President
- Mr. Pankaj Bhatia, Business and Climate Change Associate
- Mr. Suzie Greenhalgh, Senior Economist

### Background

The Greenhouse Gas Protocol Initiative (GHG Protocol) is a broad international coalition of businesses, non-governmental organizations (NGOs), government and inter-governmental organizations. It operates under the umbrella of the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI). The GHG Protocol brings together leading experts and practitioners on greenhouse gas (GHG) emissions to develop internationally accepted accounting and reporting standards. The participants are working in partnership to design, disseminate and promote the use of globally applicable accounting and reporting standards for GHG emissions.

The development of standards and guidelines to assist companies and project developers to account for GHG reduction projects becomes important as national emissions trading schemes are evolving and the trading volume of emission credits is growing. WRI and WBCSD have been approached by a number of companies and inter-governmental organizations with proposals to help develop such accounting standards. In response, GHG Protocol established a project accounting and reporting module with the aim of developing accounting and reporting standards and/or general guidance for both emission reduction and land use, land-use change and forestry (LULUCF) projects.

Under the GHG Protocol, a Baseline Taskforce has been assembled. The aim of the Baselines Taskforce is to reach agreement on guidance/standards that will be applicable to a variety of projects types and a range of schemes e.g., CDMs, national schemes with crediting components, and voluntary initiatives. This may involve some level of comparison between different approaches, and illustrating how these approaches might work under different scenarios. The interest and expertise of participants will determine the development of specific guidance relating to particular project categories (e.g. LULUCF, small electric sector projects, renewable, cement, etc.).

#### **Meeting Notes**

Mr. Lash opened the session by stating that there are emerging opportunities for Indian industry to leverage the GHG Protocol as a tool to manage their GHG emissions while integrating risk assessment elements. Mr. Nyati further stated that CII, FICCI and the other institutions at the table believe that environmental sustainability and energy security is the cornerstone to good and efficient business practices that need to be properly addressed. Regardless of a regulatory framework or cap program, Mr. Nyati added that these companies are committed to identifying cutting-edge solutions to reduce the rate of GHG emissions.

#### **Corporate-Based Module**

Mr. Bhatia made a presentation on the corporate module. As the GHG Protocol is a process towards building consensus of a methodology, the delegation reiterated that cost and simplicity in the protocol would needed to be ensure and provide a relevant model in India.

As the protocol was outlined, the component of "defining organization boundaries" led to an extensive conversation about the relevancy on boundaries in an Indian context. Currently, Indian law doesn't recognize anything beyond a company, so in terms of defining equity share in a company could become extremely complex. Mr. Sharma, Tata Steel, felt that a further defined organizational boundary component should be added to address the issue of legal matter and that would be recognized in India, legally.

These remarks led to an equally lively discussion on the operational boundaries to be measured. The issues lies, as Mr. Saxena remarked in, who should get credit if a company puts money toward a project and/or technology in another company/supplier. The factors affecting the definition of boundaries include: the ownership (legal vs. public perception), Joint Ventures, or subsidiaries issues of project investment risk and credit for emission reductions.

**Example** - While ownership is important, the group felt if a company purchases a boiler for a school as an offset, it is up to both the company and the school to negotiate an agreement stating who will receive credit for the purchase/upgrade ?

The group felt that ownership issues under the project module should be "tightly defined", so that the investor is beneficiary of the project results.

It was discussed that the Protocol needs enough flexibility to go beyond straight accounting standards to capture enough information to move companies forward. My. Nyati and Mr. Jeyaseelan, felt that there should be drivers for finding the best approach, as in:

- Business certainty ( regulatory framework )
- Credits Opportunities

Mr. Bhatia clarified that the GHG Protocol is a tool to be used not only to assess and measure GHG emission intensity, but also to initially prepare industry for a future market and/or regulatory framework.

Mr. Kumar felt that in future editions and for relevancy to the Indian scenario that the guidance should provide information on base year selection. The associated intensity factors will have a huge impact in calculating for the Indian scenario.

#### *Project-Based Module*

Ms. Suzie Greehalgh presented on the development of the Project-Based Module. Right now, there is a lot of question around how much CO2 emissions will trade for in the future. Ms. Greehalgh felt that this shouldn't matter that much as energy prices continue to fluctuate, and this doesn't stop companies from developing energy/extractions projects.

There was a strong consensus from the group that outside agencies/governing bodies should not tell a company what technology they should use. Therefore, the test of "technology additionality" should not be addressed in the project.

The additionality and baseline question, in terms of defining a business-as-usual scenario, is the " trillion dollar question " Mr. Nyati explained - If climate change didn't exist, would the company undertake this project?

The group felt it was important for the Baseline Taskforce to carefully distinguish any calculation differences between small and large projects. In addition, they felt that it was important to remember that technology is not uniform across regions, and there may be large differences between the capabilities of one company versus another.

SAN FRANCISCO, CA  
JUNE 6-7, 2002

Thursday, June 6, 2002

**Environmental Defense**

*Emission Market University / Partnership for Climate Action*

- Ms. Annie Petsonk, International Counsel – Global Climate Change Programs

**Background**

Environmental Defense is a leading national nonprofit organization representing more than 300,000 members, formerly known as Environmental Defense Fund. Since 1967, it has linked science, economics and law to create innovative, equitable and cost-effective solutions to society's most urgent environmental problems.

Environmental Defense believes strongly in the value of "learning by doing" and has been instrumental in designing innovative partnerships over the last two decades. These partnerships have expressed that transparency, flexibility, and environmental integrity provide the foundations for markets and policies to ultimately strive.

One of the Environmental Defense's innovative partnerships is the *Partnership for Climate Action (PCA)*. It provides a special forum of progressive corporations to share best practices and to collectively develop a systematic tool to achieve real emission reductions. Although such voluntary programs are not enough themselves to achieve the overall arching goal, they are an important first step. Among the PCA members are a number of influential multi-national corporations including: **Alcan, BP, DuPont, Entergy, Ontario Power Generation, Shell International, Suncor Energy** to name a few. These companies represent the vanguard of new thinking on the environment; and they are the leaders in their respective fields of carbon management.

**Meeting Notes**

Ms. Petsonk discussed the philosophy ED has followed in their industrial sector work developing incentive-based frameworks that hold to a regulatory function, but also measure flexibility. ED maintains that market-friendly environment will ensure sustainable development. ED presented several case studies with BP and Niagra Mohawk that effectively outline the demonstration and evaluation of projects.

The delegation was collectively interested in the establishment of a Environmental Markets and/or market based mechanisms. Ms. Petsonk drew upon examples from the US SOX market and the design component of banking emissions or allowances provides a flexible market for industry to comply with federal, USEPA, sulfur dioxide regulations.

All of the delegates were extremely interested in the *Partnership for Climate Action Program* of ED. The group was interested in the drivers for corporates to participate in such a program, as a current regulatory framework or markets do not exist. Ms. Petsonk using a British Petroleum (BP) example, demonstrated that technological innovation was significant driver. Ms. Petsonk also said that for institutions the edge would be "first adapter advantage" and future positioning.

The group was interested in this model as it provides a sensible, logical process for showcasing transparency, systematic measurement and verification, best practices and a "lead by example" philosophy. Mr. Nyati supported the "open forum" dialogue process of the PCA program, which has brought together a diverse set of companies to define cross-sectoral issues on measuring GHG emission target setting. Mr. Saxena added, that this less precise approach could foster more vetted processes/approaches in the future. Mr. Kumar noted that the approach could be viewed as less stringent and fail to measure the test of additionality by the UNFCCC.

CII, FICCI both expressed interest in bringing the ED packaged model on Emission Markets and the PCA program to India. It was discussed that this might be done with the assistance of the GEP-CCS Program and could serve as a nice support mechanism to the GoI as the COP-8 meetings approach.

The group discussed and Ms. Peterson outlined some areas to watch for during the COP-8 meetings:

- Marrakech to undergo further development
- Outstanding questions remain on integrating mechanisms
- Multinationals in particular will seek global clarity

**Lawrence Berkeley National Laboratories**  
*US Department of Energy Lab*

- Mr. Jayant Sathaye, Senior Staff Scientist and Group Leader
- Mr. Bill Golove, Senior Staff Scientist
- Mr. Edward Vine, Senior Staff Scientist
- Mr. Stephen Wiehl, Head, Energy Analysis

**Background**

The Lawrence Berkeley National Laboratories (LBNL), a U.S. Department of Energy Lab, Industrial Energy Analysis Division works to inform governments and international institutions on energy-related issues to help them formulate energy and environmental policies and to facilitate the diffusion of energy-efficient and environmentally friendly technologies. LBNL conducts extensive analysis on: the driving forces and trends within industry; emerging energy-efficient technologies as well as supporting the development and evaluation of policy instruments and tools to promote industrial energy efficiency. The session for the study tour was designed to highlight the following areas of work:

ProForm Software - ProForm Software has been designed for the assessment of renewable energy projects that involve electricity generation or non-electric energy production, or energy efficiency projects that save electricity and/or fossil fuels. The software calculates the emissions of CO<sub>2</sub> and several local air pollutants that may be avoided as a result of a project. ProForm only considers avoided emissions associated with combustion of fossil fuels; it does not provide for a full fuel-cycle assessment. The software will calculate the Net Present Value (NPV) and the Internal rate of Return of a project from the perspective of the investor(s). With some modifications, ProForm could also calculate the NPV from a societal perspective

Multi-Project Baseline Approach - The Multi-Project Baseline Approach is an innovative approach designed to establish a common taxonomy of project types for consistency. The approach will provide a sectoral approach to estimate the GHG benefits of a project, while providing an objective benchmark. The program has designed standard measures for project input and output by project type. While defining project boundaries, it will calculate the GHG changes to a reasonable attribute.

### **Meeting Notes**

The LBNL Staff provided a series of “mini-sessions” during the visit, and the notes below have been organized accordingly.

#### *ProForm Software*

Mr. Bill Golove provided an extensive overview of the ProForm software and expressed that the driver for creating this tool was to establish a common framework to conduct an assessment of a clean energy projects. Further, the software is to provide an evaluation of the carbon revenue stream, which is a requirement under alternative climate mitigation funding mechanisms. The delegation appreciated the notion that the tool was designed to be a hands-on, user-friendly resource to assist small entrepreneurs, businesses and local developers.

Mr. Sathaye, mentioned that the questions of “additionality” or business as usual, is a behavioral or subjective question that is exceedingly difficult to answer and that there is a need to definitely address these issues. Mr. Ghose felt the software would reduce complexity in the system and could synthesize the environmental and financial assessments into one document. The delegation collectively were concerned with the notion of adjusting a baseline and wanted to know how, when and why this could occur.

#### *Multi-Project Baseline Approach*

Mr. Jayant Sathaye made a presentation on a series of benchmarking exercises LBNL has been conducting on Multi-Project Baselines. The focus of the exercise is on estimating the GHG benefits, so as to reduce complexity, cost and subjectivity of project-specific baselines. The logic behind this approach is to provide an objective benchmark not a case-by-case hypothetical baseline. The system will provide greater clarity to project developers and programs.

Mr. Jeyaseelan noted that with the acceleration of the market, a broad based baseline, actually could hinder a specific project, or be seen as less accurate. A counter opinion was expressed that due to the uncertainties in the early open market, that a systematic process is in place will be the first and foremost goal of a project developer. Some participants expressed that it might be reasonable to anticipate the UNFCCC will design provisions for small-scale renewable projects.

#### *Monitoring, Evaluation, Reporting and Verification (MERV)*

Mr. Ed Vine outlined the Monitoring, Evaluation, Reporting and Verification (MERV) process. Mr. Vine explained that the energy savings and/or generation, need to be connected to electricity generation plants. Further, the need to monitor energy savings and generation on site and emissions savings off site was discussed

Mr. Kumar and Mr. Vine discussed the types of projects that have utilized in this process:

- First year implementation
- Projects with small savings expected, industrial projects
- New construction
- Certain types of retrofits

Mr. Ghose discussed the potential for conflict of interests in verification. Mr. Vine stressed that a 3<sup>rd</sup> Party Verification will provide confidence to stakeholders, will be an independent review of the estimation, monitoring and evaluation. Overtime the industry would like to ensure there are no financial connections to project sponsors.

*Friday, June 7, 2002*

**California Energy Commission**

- Mr. Robert Laurie, Commissioner
- Mr. Pierre Du Vair, Manager, Global Climate Change Programs
- Mr. Jeff Wilson, Program Manager, Global Climate Change Programs

**Background**

Senate Bill 1771, chaptered in September of 2000, specified the creation of the non-profit organization, the **California Climate Action Registry** (California Registry). The California Registry will help various California entities to establish greenhouse gas (GHG) emissions baselines. The California Registry will enable participating entities to voluntarily record their annual GHG emissions inventories. In turn, the State of California will use its best efforts to ensure that organizations that voluntarily inventory their emissions receive appropriate consideration under any future international, federal, or state regulatory regimes relating to GHG emissions.

On October 13, 2001, Governor Davis signed California Senate Bill 527 (SB 527). This bill requires the **California Energy Commission** and the California Air Resources Board to provide guidance to the establishment of a California Registry (entitled California Climate Action Registry) on a number of issues, such as, developing GHG emissions protocols, qualifying third-party organizations to provide technical assistance, and qualifying third-party organizations to provide certification of emissions baselines and inventories.

The California Climate Action Registry (the Registry) was subsequently established by California statute as a non-profit voluntary registry for greenhouse gas (GHG) emissions. The purpose of the Registry is to help companies and organizations with operations in the state to establish GHG emissions baselines against which any future GHG emission reduction requirements may be applied.

The Registry will provide a General Protocol and additional industry-specific protocols which will give guidance on how to inventory GHG emissions for participation in the Registry: what to measure, how to measure, the back-up data required, and certification requirements. Participants must register the GHG emissions of all operations in California, and are encouraged to report nationwide. Both gross emissions and productivity metrics will be recorded.

### **Meeting Notes**

The Commissioner of the California Energy Commission himself joined the meeting and in fact provided an introduction to a range of Global Climate Change related issues in California. The Commissioner was impressed with the "forward-thinking" of the Indian delegation and felt that California industry could, in turn, learn lessons from their counterparts in Indian industry. Furthermore, the Commissioner thought the delegation was fortunate to have a program like the LBG/GEP-CCS program to assist them in their endeavors towards a cleaner, sustainable approach.

In 1988, the first formal legislation was passed to examine the under-laying issues related to the science of climate change and the emerging trends. Among the other findings, the research exposed that California had incurred a 7-inch rise in water level, excessive El Nino patterns, Sierra Nevada snowpack levels were diminished, hotter days leading to higher emissions and smog.

Mr. Jeyaseelan asked for the breakdown of the levels of emissions in California. It was explained that transportation is the single largest contributor to CO<sub>2</sub> emissions in California. Surprisingly, the industrial sector accounts for only 13% emissions, as there are few hard industries located in the state. Electricity Generation is also high representing 16% and Residential 9% of the total emissions generated.

Mr. Nyati was interested in the range of programs, outside of the Registry that address climate change. Commissioner Laurie organized the overview as follows:

#### GHG Reduction Measures

1. Statewide Inventory of Emissions
2. Water Supply and Hydrologic climatic information
3. Fuel Cell Research
4. Greening the Fleets Initiative
5. Outreach in Ag. Sector on carbon management
6. Cleaner Fuels and Technologies
7. Promotion of Energy Efficiency, Renewable Energy and Transportation Technologies

#### Adoption Measures

1. Comprehensive Water Plan
2. Land Cover Change Detection
3. Climate Change Research
4. Natural Conservation Planning

On the California Climate Action Registry, Mr. Pierre DuVair, Manager Global Climate Change Programs, provided an overview of the program. It was discussed that the Legislative bill was passed in 2001 to formally instruct the Energy Commission to develop a non-profit institution, and to furthermore develop protocols for recording increased and long-term carbon storage.

The services to be provided will be wide range and will evolve overtime and as future policy or market instruments are created. Mr. Jeyaseelan felt that roles of the Registry should also be interwoven with the marketing aspects to ensure active participation in the program. Mr. DuVair mentioned that the primary focus would be to ensure a credible reporting and certification protocol, but simultaneously they will need to market the program to corporate entities. The Registry within the 1<sup>st</sup> year will provide rules for registering emissions, formulas=default factors, and certification requirements to establish baseline and register annual emissions.

The model was developed using the WRI GHG Protocol and tailored for a state-run model. Unlike the GHG Protocol, California will mandate corporate wide reporting within California, with an initial focus on emissions and not reductions; California corporations also will report both direct and indirect emissions; and provide resources for Third Party Verification. CII and FICCI Representatives examined the work being done as an applicable model for India. The California Climate Action Registry will commence operations in September and will be established with fee-for-service operational structure. Fees will be assessed to corporations based on size and also will include all administrative fees and systems.

## VII. FOLLOW-UP AND NEXT STEPS

### Follow-up

The U.S. Study tour provided a series of models and examples that we anticipate will be institutionalized into the industry associations and individual corporate programs. LBG will continue to coordinate with the visited U.S. institutions and follow-up on potential areas of collaboration and gathering additional information for the participants. Below, are specific areas for follow-up:

- **LBG Welcome Breakfast / Introductory Session**
  - Include Study Tour Participants in the GEP-CCS Mailing list
  - Background information on LBG World-wide Operations
  - GEP-CCS Project Development Tool-Kit
- **The World Bank Group – *Prototype Carbon Fund***
  - Project Submittal and Detailed funding Criteria to be Provided
  - Baseline Methodology Report: June 2000
  - Validation, Verification and Certification Report: April 2000
  -
- **Environmental Resources Trust – *GHG Registry Program***
  - Information on the EcoLands Forestry Program
  - Process Diagram of the Registry Procedures
- **National Association of State Energy Officials – *Combined Energy and Environment Strategy***
  - NYC/NJ Building Code Regulations on Energy Efficiency
  - Background in USDOE Energy Official Peer Exchange Program
  - Summary of leading Alternative Fuel Programs
  - Market Transformation Document – HVAC and Industrial Sector
  - West Virginia Overview on industrial road-mapping
- **World Resources Institute – *The GHG Protocol Initiative***
  - Register Interested Corporates into the Structured Feedback Process
  - Provide Case Studies of Industrial Energy Efficiency for WRI pilot
  - FICCI to provide feedback on GHG Protocol in small-scale industry
- **Environmental Defense – *Partnership for Climate Action***
  - Identify opportunities for Co-hosting Event in India
  - Collect PCA Case Study compendium, upon publishing
  - Provide further background info. on Emissions Market University
- **Lawrence Berkeley National Laboratories – *Industrial Energy Analysis***
  - Provide Copies of ProForm Software and Overview Manual
  - Identify approaches, and opportunities to pilot with small-scale industries
  - Case Studies of GHG Benchmarking working the Cement Industry
  - Obtain Copy of the new MERV document

- **California Energy Commission – California Climate Action Registry Program**
  - All Delegates to be included in California Registry Mailing List and Discussion Groups
  - Provide Copy of US Geological Survey on the impacts of GCC to the bay area over 10-year period
  - Provide Copies of CEC Alternatives fuels work to include information on:
    - Fuel Cell Development
    - Phase-out of MTBE in Fuel to Ethanol Mix
  - Formal Guidance to Registry on Reporting Protocol

**Next Steps**

- **Early July 2002** – LBG will provide each Study Tour Delegate and USAID the entire collection of presentations made during the study tour visit. LBG will continue to work with all of the US institutions in obtaining all follow-up materials for participants.
- **Mid July 2002** – LBG will hold a debriefing session with the entire study tour delegation. This roundtable exchange will be integral to identifying how models/approaches have matured since the US visit, and identify long-term strategic partnerships.
  - Identify/Receive Commitment from Firms to Participant in GEP-CCS Program in GHG Emission Benchmarking
  - Define Issues/Parameters for a potential GEP-CCS / ED Emission Market Course
- **August 2002** – LBG will design a policy exchange based on study tour participant feedback. The trip will be designed to provide additional follow-on and support to the delegation and ensure a partnership process.
- **October 2002** – LBG organizes reverse policy exchange mission to India to meet with study tour participants and other interested organizations.

ANNEX A

Study Tour Contact Information

<p><b>Mr. Fred Berger</b> Senior Vice President LBG Worldwide Operations The Louis Berger Group, Inc. 1819 H Street, NW Washington, DC 20006 Tel: (202) 331-7775 Fax: (202) 331-1058 <a href="mailto:fberger@louisberger.com">fberger@louisberger.com</a></p>	<p><b>Ms. Julie Haines</b> Vice President Global Environmental Team The Louis Berger Group, Inc. 1819 H Street, NW Washington, DC 20006 Tel: (202) 331-7775 Fax: (202) 331-1058 E-mail: <a href="mailto:jhaines@louisberger.com">jhaines@louisberger.com</a></p>
<p><b>Mr. Ted Yoder</b> Manager Trade Finance Unit The Louis Berger Group, Inc. 1819 H Street, NW Washington, DC 20006 Tel: (202) 331-7775 Fax: (202) 331-1058 <a href="mailto:tyoder@louisberger.com">tyoder@louisberger.com</a></p>	<p><b>Mr. Erik Brejla</b> U.S. Program Manager GEP-CCS Project Washington D.C. The Louis Berger Group, Inc. 1819 H Street, NW Washington, DC 20006 Tel: (202) 331-7775 Fax: (202) 331-1058 <a href="mailto:ebrejla@louisberger.com">ebrejla@louisberger.com</a></p>
<p><b>Ms. Virginia Gorsevki</b> USAID Global Climate Change Team The Ronald Reagan Building 1300 Pennsylvania Ave, N.W. Rm 3.08 Washington, D.C. 20523-3800 Tel: (202) 712-1463 Fax: (202) 216-3227 <a href="mailto:vgorsevski@usaid.gov">vgorsevski@usaid.gov</a></p>	<p><b>Ms. Karen Lawson</b> Senior Policy Analyst Center for Clean Air Policy 750 First Street, N.E. Washington, D.C. 20006</p>
<p><b>Dr. Sandra Brown</b> Land Use and Land Change Specialist Winrock International 38 Winrock Drive Morrilton, AR 72110</p>	<p><b>Mr. Mark Oven</b> Infrastructure and Development Services PA Consulting Group 1750 Pennsylvania Ave., NW, Suite 1000 Washington, D.C. 20006 Tel: (202) 442-2444 Fax: (202) 4422448 <a href="mailto:Mark.oven@paconsulting.com">Mark.oven@paconsulting.com</a></p>
<p><b>Mr. Chandra Sekhar Sinha</b> Senior Economist The World Bank – Prototype Carbon Fund 1819 Pennsylvania Avenue Washington, D.C. 20006 Tel: (202) 458-7475</p>	<p><b>Mr. Wiley Barbour</b> Director of Registry Environmental Resources Trust – GHG Registry Program 1700 K Street, NW, Suite 703 Tel: (202) 785-8577 Fax: (202) 785-2739</p>

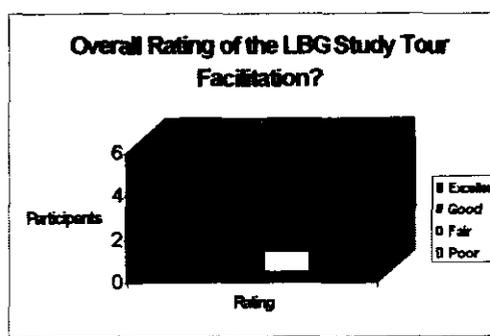
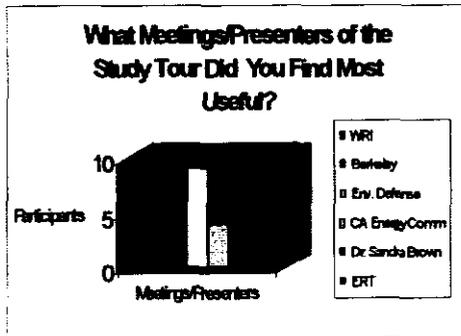
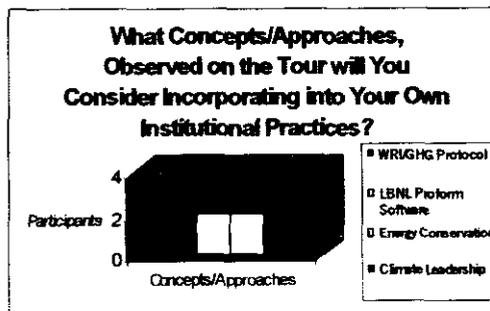
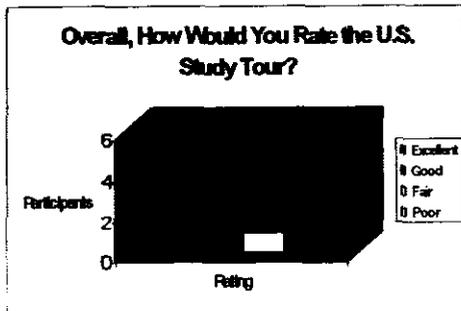
<p><b>Mr. David Terry</b>                  Managing Director                  National Association of State Energy Officials –                  Combined Energy and Environment Strategy                  1414 Price Street, Suite 200                  Alexandria, VA 22314                  Tel: (703) 299-8800                  Fax: (703) 299-6208                  dterry@naseo.org</p>	<p><b>Ms. Cynthia Cummis</b>                  Climate Protection Partnerships Division                  U.S. Environmental Protection Agency –                  1200 Pennsylvania Avenue – MS 6202                  Washington, D.C. 20460                  Tel: (202) 564-3480                  Fax: (202) 565-6674                  Cummis.cynthia@epa.gov</p>
<p><b>Mr. Jonathan Lash</b>                  President                  World Resources Institute – The GHG Protocol Initiative                  10 G Street, NE                  Washington, D.C. 20002                  Tel: (202) 729-7600                  Fax: (202) 729-7637</p>	<p><b>Mr. Pankaj Bhatia</b>                  Business and Climate Change Associate                  World Resources Institute – The GHG Protocol Initiative                  10 G Street, NE                  Washington, D.C. 20002                  Tel: (202) 729-7600                  Fax: (202) 729-7637</p>
<p><b>Ms. Suzie Greenhalgh</b>                  Senior Associate                  World Resources Institute – The GHG Protocol Initiative                  10 G Street, NE                  Washington, D.C. 20002                  Tel: (202) 729-7786                  Fax: (202) 729-7686                  suzieg@wri.org</p>	<p><b>Ms. Heather Tansey</b>                  Program Analyst, Energy Supply &amp; Industry Branch                  Climate Protection Partnerships Division                  Environmental Protection Agency                  USEPA (Code 6202J)                  1200 Pennsylvania Ave., NW                  Washington, D.C. 20460                  Tel: (202) 564-3485                  Fax: (202) 565-2079                  Tansey.Heather@epa.gov</p>
<p><b>Mr. Vincent Canobreco</b>                  Office of Air and Radiation                  Energy Supply and Industry Branch                  Environmental Protection Agency                  1200 Pennsylvania Ave., NW                  Mail Code 6202J                  Washington, D.C. 20460                  Tel: (202) 564-9043                  Fax: (202) 565-6674                  Canobreco.Vincent@epa.gov</p>	

<b>SAN FRANCISCO, CA</b>	
<p><b>Ms. Annie Petsonk</b>                      International Counsel (WDC Office)                      Environmental Defense - Partnership for Climate Action                      1875 Connecticut Avenue, NW                      Washington, D.C. 20009                      Tel: (202) 387-3500 ext. 3323                      Fax: (202) 234-6049                      apetsonk@environmentaldefense.org</p>	<p><b>Mr. Jayant Sathaye</b>                      Senior Staff Scientist and Group Leader                      Lawrence Berkeley National Laboratories -                      US Department of Energy Lab                      One Cyclotron Road, MS: 90-4000                      Bldg, 90 Rom 4000                      University of California Berkeley, CA 94720                      Tel: (510) 486-6294                      Fax: (510) 486-6996</p>
<p><b>Mr. William Golove</b>                      Senior Staff Scientist                      Lawrence Berkeley National Laboratories -                      US Department of Energy                      One Cyclotron Road, MS: 90-4000                      Berkeley, CA 94720                      Tel: (510) 486-5229                      Fax: (510) 486-6996                      whgolove@lbl.gov</p>	<p><b>Mr. Robert Laurie</b>                      Commissioner                      California Energy Commission                      New California Climate Action Registry Program                      1516 Ninth Street, MS-41                      Sacramento, CA 95814-5512                      Tel: (916) 654-4001                      Fax: (916) 653-3478                      rlaurie@energy.state.ca.us</p>
<p><b>Mr. Pierre Du Vair,</b>                      Manager                      Global Climate Change Programs                      California Energy Commission                      New California Climate Action Registry Program                      1516 Ninth Street, MS-41                      Sacramento, CA 95814-5512</p>	<p><b>Mr. Tim Olson</b>                      Director                      Energy Technology Export Programs                      California Energy Commission                      New California Climate Action Registry Program                      1516 Ninth Street, MS-41                      Sacramento, CA 95814-5512</p>
<p><b>Mr. Ernst Worrell</b>                      Staff Scientist                      Environmental Energy Technologies Division                      Lawrence Berkeley National Laboratory                      One Cyclotron Road, MS: 90-4000                      University of California                      Berkeley, CA 94720                      Tel: (510) 486-6794                      Fax: (510) 486-6996                      EWorrell@lbl.gov</p>	<p><b>Mr. Edward Vine</b>                      Staff Scientist                      Environmental Energy Technologies Division                      Lawrence Berkeley National Laboratory                      One Cyclotron Road, MS: 90-4000                      University of California                      Berkeley, CA 94720                      Tel: (510) 486-6047                      Fax: (510) 486-6996                      elvine@lbl.gov</p>

<p><b>Mr. Stephen Wiel</b> Head Energy Analysis Department Lawrence Berkeley National Laboratory One Cyclotron Road, MS: 90-4000 University of California Berkeley, CA 94720 Tel: (510) 486-5396 Fax: (510) 486-6996 swiel@lbl.gov</p>	<p><b>Ms. Lynn Price</b> Deputy Group Leader, International Energy Studies Energy Analysis Department Environmental Energy Technologies Division Lawrence Berkeley National Laboratory One Cyclotron Road, MS: 90-4000 University of California Berkeley, CA 94720 Tel: (510) 486-6519 Fax: (510) 486-6996 lkprice@lbl.gov</p>
<p><b>Ms. Jennifer Williams</b> Associate Energy Specialist California Energy Commission Transportation Energy Division Export Program 1516 9<sup>th</sup> Street, MS 45 Sacramento, CA 95814 Tel: (916) 654-4710 Fax: (916) 654-4676 jwilliam@energy.state.ca.us</p>	<p><b>Mr. Pierre H. duVair</b> Manager, Climate Change Program California Energy Commission Transportation Energy Division 1516 9<sup>th</sup> Street, MS 41 Sacramento, CA 95814 Tel: (916) 653-8685 Fax: (916) 653-4470 pduvair@energy.state.ca.us</p>

## ANNEX B

### SUMMARY OF DELEGATE EVALUATIONS





**The GHG Protocol and Opportunities for its Adoption by Industries and Electric Utilities in India**

**A Pankaj Bhatia Policy Exchange Visit**

**NEW DELHI AND MUMBAI, INDIA  
APRIL 1 – APRIL 4, 2002**

## EXECUTIVE SUMMARY

Currently, the international community is in absence of a standard, to provide formal guidance to industries across the world to measure their GHG emissions intensity. This information could prove invaluable to corporations, by means of assessing their future risk, if a regulatory framework would evolve, as a result of the UNFCCC negotiations. Furthermore, having an accurate understanding of their emissions intensity will serve as a building block towards designing internal measures, if a corporate is seeking to trade those emissions in the future, on the open market.

By virtue of preparing and positioning Indian industry, LBG/GEP-CCS is interested in introducing a systemic tool that will facilitate in establishing a common platform for comparing environmental performance of industries, in terms of GHG emissions intensity. The WRI/WBCSD *GHG Protocol* complements these approaches and has been proven successful in "road testing" implementation worldwide. Further, the Protocol offers a globally accepted tool as a practical avenue for Indian industry, Government, and other stakeholders to assess the inherent GHG risk and subsequently design cost-effective measures for mitigation.

Recognizing the ancillary benefits of the GHG Protocol, LBG/GEP-CCS has formed a collaborative partnership with the World Resources Institute (WRI) to bring the GHG Protocol to India and to tailor the Protocol computational tools to local industrial conditions. The GHG Protocol tools will enable Indian participants to measure their emissions intensity and furthermore use this comprehensible information to make informed decisions for addressing measures to control/reduce emissions, thus managing risk and exploring new opportunities, whether technological or management planning applications. A successful implementation, in India, will enable GoI officials to consider appropriate policy instruments that will incorporate emissions accounting measures.

As a first step in this process, from April 1 – April 4, 2002, LBG/GEP-CCS brought Mr. Pankaj Bhatia, Business and Climate Change Associate, of the World Resources Institute (WRI), to India, under a policy exchange mechanism. Mr. Bhatia's trip was designed to provide first hand information on the protocol by: actively engaging representatives from the GoI, and Industry associations to promote/encourage their participation and consideration in adopting Protocol standards.

In association with the Confederation of Indian Industries (CII) and the Federation of Indian Chamber of Commerce and Industry (FICCI), a series of Industry Roundtable events were organized in New Delhi and Mumbai. These Roundtables provided an open "semi-formal" setting to discuss the GHG Protocol, the ancillary benefits of the tool, and further identify how the Protocol could be effectively implemented in the Indian scenario.

During these roundtable sessions, the Indian business participants were very receptive to the information and the follow-up discussion on GHG Protocol. It was quite obvious during the course of the industry roundtables that there are several Indian companies who have recently undertaken, or are planning a few projects on energy efficiency and conservation at their facilities. These companies clearly saw a great opportunity for them to realize their energy savings in terms of GHG reductions and therefore found the GHG Protocol, a valuable tool to analyze their internal operations.

In addition, LBG/GEP-CCS recognizes as part of building a long-term strategy towards developing a GHG emission standard, it is crucial to have the appropriate GoI ministries involved in this process. This process will hopefully support National and State Governments in the conceptualization and development of appropriate policy and GHG accounting framework, based on and consistent with GHG Protocol accounting standard. LBG/GEP-CCS and CII, jointly held a GoI Roundtable in New Delhi to showcase the benefits of the GHG Protocol and opportunities for the future.

Overall, the following issues seemed to be of greatest concern for Indian ministries in developing or adapting a GHG accounting framework for Indian businesses:

- Understanding and integration of India's climate change position and approach to business GHG accounting
- Relevance and scope for performance or emission rights indicator in terms of per capita and/or per economic output
- Integration of India's sustainable development objectives and GHG accounting for businesses and projects
- Sector benchmarking and prioritization to identify those sectors which have cost-effective GHG reduction potential as well as meet India's other sustainable development objectives

Mr. Bhatia also met with the Climate Change Center at Development Alternatives (DA) and premiere project developers/sponsors to discuss the integration of the GHG protocol as a tool in assessing the positive impacts of climate change mitigation projects.

Mr. Bhatia's visit was proven instrumental in assessing the appropriate avenues the Protocol can be successful in a practical application with a broad stakeholder community. The following areas will need to be tailored to ensure the Protocol is adaptable to the Indian scenario:

- *Adaptation/revision of the relevant corporate standards (e.g. organizational boundary standard)*
- Modifications in the stationary and mobile combustion tools and development of other needed tools (e.g. oil & gas sector)
- Development of emission factors database
- Effective participation of key Indian stakeholders in the development of the project accounting standard

LBG/GEP-CCS will continue to work with WRI, and the appropriate Indian Industry Associations on devising a "roadmap" to implement the GHG Protocol in India.

## I. Background on Policy Exchange Approach

The GHG Protocol is an innovative tool that will enable Indian participants to measure their emissions intensity and furthermore use this comprehensible information to make informed decisions for addressing measures to control/reduce emissions thus managing risk and exploring new opportunities, whether technological or management planning applications.

LBG/GEP-CCS will work closely with both the Confederation of Indian Industries (CII) and the Federation of Indian Chamber of Commerce and Industry (FICCI) on identifying the appropriate industrial representatives, who will recognize an opportunity for measuring their GHG emission intensity.

## II. OBJECTIVES

- To actively engage a broad stakeholder group to discuss the successfulness of the corporate based guidelines and promote the development of the project based standards.
- To understand latent obstacles and barriers to implementing the GHG Protocol within the Indian context and suggest possible solutions.
- To Identify the key accounting and policy issues associated with adopting the GHG Protocol in India.

## III. OUTCOMES

The anticipated outcomes of the policy exchange visit will focus on:

- Identifying a leading industry association and/or Partner Institutions to serve as the clearinghouse in leveraging "industry champions" to voluntarily pilot the GHG Protocol.
- Attaining GoI/Ministries expressed interest in the GHG Protocol as an instrument for assimilating emissions accounting in regulatory reporting.
- Exploring opportunities for the development of an Indian GHG Protocol Task Force and to participate in future Protocol Piloting.

## IV. REPRESENTATIVE POLICY EXCHANGE PARTICIPANTS

The WRI/WBCSD *GHG Protocol* is an innovative tool that can be utilized by several stakeholder groups, each of them playing a critical role in devising strategies and policy instruments to reduce the rate of GHG emissions. Below, provides an explanatory approach for targeting each of these areas:

Government - The Government of India can take a proactive role by incorporating emissions intensity statistics in five year and also in annual energy and environment reporting. The

introduction of an emissions accounting and reporting standards will provide a systematic mechanism to evaluate and monitor the progress of facilities.

The protocol could be a tool that could be useful to the Bureau of Energy Efficiency; in assessing the performance of industries as the GHG emissions have a direct correlation with use of energy in processing and utilities.

*Industry* - The industrial sector is the largest emitter of CO<sub>2</sub> and other GHGs. GHG emissions has a direct linkage to the use of energy in industrial processes. GHG Protocol tools would inform the industry of their level of emissions intensity and thereby enable management to make informed decisions on appropriate technological interventions. Under the GEP-CCS program, LBG has been successful in the promotion of the adoption of a range of technological and management applications to appropriately address the reduction of GHGs. The introduction of the protocol and an understanding of the intricacies of the guidelines will provide a valuable tool for corporations to take the next step towards defining specific reduction opportunities.

*Climate Change Centers* - The Climate Change Center (CCC) at Development Alternatives (DA) provides a range of services from Global Climate Change outreach and awareness to providing preliminary technical assistance to GCC mitigation project developers. The CCC can work with developers in conducting the Protocol exercise, as this will serve as a proxy for baseline and M&V development. DA could serve as a clearinghouse for WRI in obtaining technical feedback on the Protocol.

## V. POLICY EXCHANGE VISIT SCHEDULE

### Mumbai, India

*Monday, April 1, 2002*

- Federation of Indian Chamber of Commerce and Industry – Industry Round Table

### New Delhi, India

*Tuesday, April 2, 2002*

- Confederation of Indian Industries – Government of India Roundtable

*Wednesday, April 3, 2002*

- Confederation of Indian Industries – Energy Intensive Industry Sector Roundtable
- Society of Development Alternatives Roundtable

*Thursday, April 4, 2002*

- National Thermal Power Corporation Roundtable
- USAID/India Debrief Session

## VI. OVERVIEW AND PROCEEDINGS OF THE POLICY EXCHANGE VISIT

*The Policy Exchange Visit was organized into five major events comprising of three Roundtables and two individual meetings with NTPC and Development Alternatives (DA). Two of the Roundtables were organized, in collaboration with Confederation of Indian Industry (CII). These roundtables were designed to ensure active discussion and consensus within the relevant Government of India Ministries and the other with those energy intensive industrial sectors. In addition, to ensure maximum outreach and impact within industry, another Industry focused roundtable was organized, in association with Federation of Indian Chamber of Commerce and Industry (FICCI), in Mumbai.*

*The goal of these roundtables was to provide comprehensive information on the GHG Protocol and standards. The roundtables would provide constructive dialogue and would begin to build a broader consensus on the utilization of the Protocol in India and encourage support and participation in the development process. At each of the Roundtable, Mr. Ron Sisseem , LBG/GEP-CCS, described the need for a international GHG emission accounting standard and that the GHG Protocol has taken monumental steps towards furthering this agenda. Mr. Bhatia of the World Resources Institute (WRI) made a detailed presentation on the need/drivers, progress, experiences in developing and testing the protocol. He also described various modules and tools in the protocol. A brief on the proceedings at these events is described below.*

### FEDERATION OF INDIAN CHAMBER OF COMMERCE AND INDUSTRY – INDUSTRY ROUND TABLE

The Western Regional Office of Environment Information Center of FICCI organized a Roundtable on April 1, 2002 in Mumbai and was attended by 16 participants. The list of participants is enclosed in Annex A. The Roundtable was represented by a wide variety of sectors, among them being, Cement, power utility, oil and gas, petrochemicals, and paper industries. Some of the participants were managing energy efficiency improvement projects in their respective industries and therefore realized the importance of the GHG Protocol. Mr. Jivrajka, President of FICCI Western Region, inaugurated the Roundtable. Mr. M. A. Jeyaseelan, Executive Director, EIC FICCI welcomed the delegates and provided FICCI's perspective in organizing the Roundtable.

#### Salient Observations

- There was a strong interest among the participants to apply GHG Protocol, but continual improvement was likely needed to adapt to the Indian scenario
- Several companies undertaking energy efficiency activities recognized the GHG emission reduction benefits of which can be captured through use of GHG Protocol
- Specific interest in applying and pilot testing GHG Protocol were expressed by ISPAT Industries Limited and Sharda Paper Mills
- Oil & Gas sector companies were interested in using GHG Protocol but since the tool for this sector is not a part of the GHG Protocol, they requested WRI to develop the same in future

FICCI expressed interest in developing a voluntary pilot testing program for GHG accounting in select industries sector. From the interest shown by the participants, the steel and paper sector companies could be candidates for possible pilot testing of the GHG Protocol.

#### **CONFEDERATION OF INDIAN INDUSTRIES – GOVERNMENT OF INDIA ROUNDTABLE**

---

CII Environment Management Division organized the GoI focused Roundtable on April 2, 2002 in New Delhi. Over a dozen senior and middle level government officials attended the Roundtable session. The list of participants is in enclosed in Annex A. The most notable ministries included: Ministry of Environment & Forests (MOEF), Ministry of Power (MOP), Ministry of Chemicals & Petrochemicals, Central Pollution Control Board (CPCB) and Govt. of Gujarat, Ministry of Industries.

Mr. K. P. Nyati, Head Environmental Management Center, CII, welcomed the delegates and highlighted the importance of the GHG Protocol as an innovative policy instrument and decision making tool for the GoI.

#### **Salient Observations**

- There was interest in knowing how the Protocol can be used in decision making e.g. to prioritize GHG reduction projects in India.
- Need for pilot testing the GHG Protocol to adopt it to Indian industry and economic conditions.
- Need for awareness building activities through workshops.
- Involving BIS in pilot testing and eventually adopting a suitable standard for India.

#### **CONFEDERATION OF INDIAN INDUSTRIES – ENERGY INTENSIVE INDUSTRY SECTOR ROUNDTABLE**

---

CII Environment Management Division organized an Industry focused Roundtable on April 3, 2002 in New Delhi. Over 20 participants, representing a wide range of industries, attended the Roundtable. The list of participants is in enclosed in Annex A. These included; Cement, Power, Petrochemicals, Airport authority, Distributed power, Plastics manufacturer association, SIAM and Fertilizer association. Mr. Nyati welcomed delegates and highlighted the importance of the GHG Protocol for the Indian industry. The participants were engaged early on as many of them were involved in activities leading to GHG emission reduction.

#### **Salient Observations**

- Participants expressed strong interest to apply GHG Protocol.
- Several companies are undertaking energy efficient activities for which benefits can be realized from GHG abated.
- An opinion emerged that setting Account Principals is very important as it could lead to potential conflicts.
- Participants wished to understand more details about how different processes adopted in an industry were accounted for in the Protocol, whether there were any opinions expressed by M&V agencies towards the protocol and how GHG accounting is relevant to small companies by global standards as prevalent in India.

- Specific interest in applying and pilot testing GHG Protocol; cement, power, petrochemicals, airport authority .
- Participants voiced concern in waiting for ISO to develop the GHG accounting standards, as the process usually is time consuming. They therefore opined that the Bureau of Indian Standards could be involved in the pilot testing phase, which would make the transition of the standard easier in the country,
- CII Environment Management Division was very proactive and expressed interest as a potential partner in piloting the GHG protocol in India.

#### **NATIONAL THERMAL POWER CORPORATION ROUNDTABLE**

---

The Center for Power Efficiency and Environment Performance (CENPEEP) organized the meeting at NTPC on April 3, 2002. CENPEEP works closely with USAID/India in managing the Efficient Coal Conversion component of GEP. The center has been on the forefront on testing and introducing several state of the art coal combustion and power generation technologies with U.S. Department of Energy and EPRI. The session was attended by ten officials of CENPEEP and their U.S. adviser. Mr. S. C. Deo Sharma, Addl. General Manager CENPEEP provided a brief outline of their work in the power sector. Mr. Sisssem introduced the GEP-CCS program and the need for bringing awareness about the GHG protocol to NTPC, which as the largest generation utility in India provide an optimal opportunity.

#### **Salient Observations**

- NTPC expressed tremendous interest in applying the GHG Protocol to its operations and also to judge the GHG benefits that could accrue due to improvement in plant load factors due to introduction various operational measures.
- CENPEEP mentioned about two power efficiency improvement projects being formulated at present, which can be reviewed using the protocol. These projects achieve GHG reduction through:
  - Using advanced coal combustion and power generation technologies
  - Improving operational practices
- NTPC also expressed interest in developing a small project power generation sector and pilot testing GHG Protocol on this project so that other utilities can learn through this experience.

#### **SOCIETY FOR DEVELOPMENT ALTERNATIVES ROUNDTABLE**

---

A meeting with the GEP-CCS Climate Change Center at DA was organized on April 4, 2002. The DA/CCC staff has been working on GHG mitigation project development for over two years and appreciated the need of the GHG Protocol, as a tool for measuring GHG emission intensity. The center was keen to understand how the tools of the protocol worked and what was the evolution of its design. They were also interested in the international case studies and lessons learned from the initial piloting. DA felt that the GHG Protocol would prove exceedingly valuable for analyzing specific project criteria (Project-Based Tool). They suggested that WRI should consider pilot testing the Project-Based Protocol tools on those GHG mitigation projects, which have been provided extensive technical assistance under the GEP-CCS Program.

### **USAID/India Debriefing Meeting**

---

The GHG Protocol Policy Exchange Team held a meeting with Mr. Sandeep Tandon, GEP-CCS CTO, Mr. Dick Edwards, Director E<sup>3</sup> office, and Mr. John Smith Sreen, Deputy Director of the E<sup>3</sup> office on April 4, 2002.

#### **Salient Points of Discussion**

- Were there interests for particular industries?
- Was the GHG Protocol operation elaborated as the tools have some level of sophistication?
- Were the complexities in working with the tools in cases where there were JVs and cross holdings brought out?
- Were WRI met? What were WRI expectations from MOEF?
- What are the next steps proposed to be taken in applying and pilot testing the GHG Protocol

#### **VI. FOLLOW-UP AND NEXT STEPS**

##### **Follow-up**

- Register interested corporations, institutions and individuals into the GHG Protocol Structure Feedback Process.
- Enroll all participating institutions in the WRI GHG Protocol World-Wide Network Database. This will provide regular, exclusive information including:
  - GHG Protocol Newsletter
  - Updates on the Development of the Project-Based Protocol
  - Future Case Studies of implementing the Protocol
- Provide CII, FICCI, and DA additional background and PR Materials on the GHG Protocol.

##### **Next Steps**

- May 2002** - LBG will work with WRI on identifying approaches for piloting the GHG Protocol in India. LBG will continue the necessary follow-up with interested industry and GoI representatives and furthermore will design a U.S. Study Tour to the U.S., with the GHG Protocol as one session. (June 2002).
- July 2002** - As a follow-up to the U.S. Study Tour, LBG will coordinate with attending participants and identify those corporations interested in piloting the GHG Protocol.

- **August 2002** – LBG will design appropriate strategy, GHG Protocol Audit Manuals for piloting the GHG Protocol. LBG will work closely with WRI on this process. LBG will outline the GHG Protocol Clearinghouse design and disseminate to interested organizations for comment.
  
- **September 2002** – LBG/GEP-CCS and the Identified “Clearinghouse” Organization will begin first phase of piloting the Protocol.\*

*\* LBG has submitted a contract modification to USAID/India Office of Contracts, that will modify current contract line items CLIN 3: Subtask 3.D and 3.E. Upon receiving approval, LBG will then be able to actively begin working on piloting the GHG Protocol in India with 4 corporations.*

## ANNEX A

### ROUNDTABLE PARTICIPANT LIST

	Phone	Fax	E-MAIL
Mumbai - 20	2317425/2039122-261	2317453/2317429	<a href="mailto:gmishra@accement.com">gmishra@accement.com</a>
Thane	5837368	5824395	<a href="mailto:anantharaman@accement.com">anantharaman@accement.com</a>
Thane	5835038	5824395	<a href="mailto:parlikar@accement.com">parlikar@accement.com</a>
Saki Vihar Road, Mumbai - 72	8581771	8581890	<a href="mailto:an@epc.ltindia.com">an@epc.ltindia.com</a>
Bandra - W, Mumbai - 50	6418983/6441504	6441504	<a href="mailto:jypunegar@hpcl.co.in">jypunegar@hpcl.co.in</a>
Mumbai - 20	2831779-telefax	2831779-telefax/2851421	<a href="mailto:sgsuby@hpcl.co.in">sgsuby@hpcl.co.in</a>
Mumbai - 74	5542980	5545796	<a href="mailto:iverci@bharatpetroleum.com">iverci@bharatpetroleum.com</a>
Mumbai - 85	5505313-23674	5505313/5505151	<a href="mailto:vraj@magnum.barc.emet.in">vraj@magnum.barc.emet.in</a>
Raigad-Maharashtra	952143-77790	952143-77775	<a href="mailto:vitthal_waghchaure@ispatindia.com">vitthal_waghchaure@ispatindia.com</a>
Powai-Mumbai-76	6937989	6939282	<a href="mailto:mpatankar@iec.cerf.org">mpatankar@iec.cerf.org</a>
Mumbai - 51	6513922	6422131/2619100	<a href="mailto:ggdalai@hotmail.com">ggdalai@hotmail.com</a>
Mumbai - 94	5563350	5566507	<a href="mailto:pmwagh@npcvsnpcil.emet.in">pmwagh@npcvsnpcil.emet.in</a>
Mumbai - 95	5560222-3016	5563350/5566507	<a href="mailto:jsingh@npcvsnpcil.emet.in">jsingh@npcvsnpcil.emet.in</a>
Mumbai - 21	2856470	2026838	<a href="mailto:abcsafety@hotmail.com">abcsafety@hotmail.com</a>
Mumbai - 51	6536814	6531163	<a href="mailto:joachim@icici.com">joachim@icici.com</a>

<p><b>1. Mr. P. L. Sapra</b> Sr. Deputy Director, EMD-SAIL, Express Building, 1<sup>st</sup> Floor, Bahadur Shah Zafar Marg, New Delhi - 110 002 Tel. : 331-235 Fax : 331 7375</p>	<p><b>2. Mr. J. Kumar</b> Additional Director Steel Authority of India Limited 9/10, Bahadur Shah Zafar Marg, Express Building New Delhi - 110 002 Tel. : 335 0058 Fax 331 0236</p>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p><b>3. Mr. V. P. Bhardwaj</b> Secretary General <b>All India Plastic Industry Association</b> 203, Hansa Tower, 25 Central Market Ashok Vihar, Delhi – 110 052 Tel. : 741 7104/ 724 2826 Fax : 741 2595 E-mail: <a href="mailto:ai pia@vsnl.net">ai pia@vsnl.net</a></p>	<p><b>4. Shri Ravi K. Aggarwal</b> Hony. General Secretary <b>All India Plastic Industry Association</b> 203, Hansa Tower, 25 Central Market Ashok Vihar, Delhi – 110 052 Tel. : 741 7104/ 724 2826 Fax : 741 2595 E-mail: <a href="mailto:ai pia@vsnl.net">ai pia@vsnl.net</a></p>
<p><b>5. Mr. K. K. Khanna</b> Director Technical <b>Nika Engineers Private Limited</b> B-27, Sector – 6, Noida 201 301 (UP) Tel. : 91-442 2643 / 482 Fax : 261 9742 E-mail: <a href="mailto:nika@vsnl.com">nika@vsnl.com</a>, <a href="mailto:sales@mikaengg.com">sales@mikaengg.com</a></p>	<p><b>6. Mr. T. K. Dhar</b> Ex. – ED (Env. &amp; R &amp; R) Consultant <b>NTPC, 31-B Mansarovar Apts., Sector – 61,</b> Noida (U.P.) Tel.: 91-458 7226 / 6036 E-mail: <a href="mailto:tkd.2002@yahoo.co.in">tkd.2002@yahoo.co.in</a></p>
<p><b>7. Mr. A. V. Anand</b> Executive Director <b>Airport Authority of India</b> Opn. Bldg., Gurgaon Road, New Delhi – 110 037 Tel : 565 2364 Fax: 565 3814 E-mail : <a href="mailto:ird7@giadl01.vsnl.net.in">ird7@giadl01.vsnl.net.in</a></p>	<p><b>8. Dr. (Mrs.) B. Swaminathan</b> Additional Director (Env. &amp; Safety) <b>THE FERTILIZERS ASSOCIATION OF INDIA</b> 10, Shaheed Jit Singh Marg, New Delhi – 110 067 Tel. : 651 7313 / 05 Fax : 696 0052 E-mail: <a href="mailto:ai@vsnl.com">ai@vsnl.com</a></p>
<p><b>9. Mr. Rajat Nandi</b> Director General – SIAM Core 4B, 5<sup>th</sup> Floor, India Habitat Centre, Lodi Road New Delhi – 110 003 Tel.: 464 8555 / 7810-12 Fax : 464 8222 E-mail: <a href="mailto:siam@bol.net.in">siam@bol.net.in</a>, <a href="mailto:siam@vsnl.com">siam@vsnl.com</a></p>	<p><b>10. Mr. L. C. Khatri</b> Resident Manager <b>NALCO, 303, Mercantile House</b> 15, Kasturba Gandhi Marg, New Delhi – 110 001 Tel. : 370 6080 – 81 Fax : 372 1195</p>
<p><b>11. Mr. Amitava Banerjee</b> Dy. General Manager – Technology <b>Lurgi India Company Limited</b> A-30, Mohan Cooperative Industrial Estate, Mathura Road, New Delhi – 110 044 Tel. : 696 0035 Fax : 695 0042 / 0072 E-mail: <a href="mailto:amitav_banerjee@lurgi.de">amitav_banerjee@lurgi.de</a></p>	<p><b>12. Mr. V. N. Das</b> Director – Environment Health &amp; Safety <b>Ranbaxy Laboratories Ltd.</b> 105, Raja House, 31 Nehru Place, 1 Floor New Delhi – 110 019 Tel. : 622 8245 Fax : 645 1753 E-mail : <a href="mailto:vijaya@ranbaxy.co.in">vijaya@ranbaxy.co.in</a></p>
<p><b>13. Mr. A. K. Ghose</b> Vice President (Environment) <b>Jubilant Organosys Ltd.</b> Plot 1-A, Sector 16-A, Institutional Area, NOIDA –201 301 (U.P.) Tel. : 91-451 6627 / 6601 / 6611 Fax : 91-451 6627 / 6629 E-mail : <a href="mailto:ashok_k_ghose@jubilantorganosys.com">ashok_k_ghose@jubilantorganosys.com</a></p>	<p><b>14. Mr. L. Pugazhenthay</b> Executive Director – ILZDA Jawahar Dhatu Bhawan 39, Tughlaqabad Institutional Area M. B. Road, New Delhi – 110 062 Tel : 6080360 / 609 2536 / 607 6889 Fax : 608 9522 E-mail: <a href="mailto:ilzda@mantraonline.com">ilzda@mantraonline.com</a></p>
<p><b>15. Mr. Pramod Singh</b> Business Development Manager Corporate Business Development <b>BSES Limited, BSES Tower</b> A-2, Sector – 24, NOIDA 201 301 Tel. : 91-455 7218 / 110 / 167. 452 0235 Fax : 91-455 8908. 452 6383</p>	<p><b>16. Mr. Ram Mohan</b> Manager – Honda Siel Power Products Ltd. 5<sup>th</sup> Floor, Kirti Mahal, 19 Rajendra Place New Delhi Tel. : 572 8966 Fax : 575 2218 E-mail: <a href="mailto:ho.mgt@hondasielpower.com">ho.mgt@hondasielpower.com</a></p>
<p><b>17 Mr. Y. R. Shrivastava</b> <b>NTPC</b></p>	<p><b>18. Mr. N. Shishu Kumar</b> <b>NTPC</b></p>
<p><b>19. Mr. Naresh Kumar Sood</b> Chief Manager – Env. &amp; Social Management Division <b>Power Grid Corporation of India Ltd.</b> 89, Hemkunt Chambers, Nehru Place New Delhi – 110 019 Tel. : 609 2853 Fax : 647 6133 E-mail: <a href="mailto:nksood@powergridindia.com">nksood@powergridindia.com</a></p>	<p><b>20. Dr. Rajiv Shrivastava</b> Manager- Environment <b>Power Grid Corporation of India Ltd.</b> 89, Hemkunt Chambers, Nehru Place New Delhi – 110 019 Tel. : 609 2853 Fax : 647 6133</p>

CIP Government Round Table	
<p><b>1. Dr. G. K. Pandey</b> Advisor, MoEF Paryavaran Bhawan, CGO Complex Lodi Road, New Delhi - 110 003 Tel. / Fax : 436 0467</p>	<p><b>2. Dr. Subodh Sharma</b> Advisor, MoEF Paryavaran Bhawan, CGO Complex Lodi Road, New Delhi - 110 003 Tel. / Fax : 436 0861</p>
<p><b>3. Mr. M. Sengupta</b> Advisor, MoEF Paryavaran Bhawan, CGO Complex Lodi Road, New Delhi - 110 003 Tel. / Fax : 436 0734 E-mail: <a href="mailto:msen2k@lycos.com">msen2k@lycos.com</a></p>	<p><b>4. Dr. J. R. Bhatt</b> Additional Director - MoEF Paryavaran Bhawan, CGO Complex Lodi Road, New Delhi - 110 003 Tel. / Fax : 436 3962</p>
<p><b>5. Mr. K. c. Khandelwal</b> Advisor - MNES Block No. 14, CGO Complex Lodi Road, New Delhi - 110 003 Tel. : 436 0396 E-mail: <a href="mailto:advkck@ran02.nic.in">advkck@ran02.nic.in</a></p>	<p><b>6. Shri Lalit Mansingh</b> Principal Secretary, Govt. of Gujarat Industries &amp; Mines Dept. Block #5, 3<sup>rd</sup> Floor New Sachivalya, Gandhinagar 382 010 Tel.: 079 - 322 0392, Fax : 079 - 325 0844 E-mail: <a href="mailto:mansingh_l@hotmail.com">mansingh_l@hotmail.com</a></p>
<p><b>7. Mr. Sanjiv Saran</b> Director - Dept. of Chemicals &amp; Petrochem. Min. of Chemicals &amp; Petrochemicals Room 222 - A, Shastri Bhawan, New Delhi - 110 001 Tel / Fax : 338 2176 E-mail : <a href="mailto:direw.cpc@sb.nic.in">direw.cpc@sb.nic.in</a></p>	<p><b>8. Shri R. G. Badhani</b> Dy. Director General (Supplies) Director General of Supplies &amp; Disposal <b>MINISTRY OF COMMERCE &amp; INDUSTRY</b> 2<sup>nd</sup> Floor, Jeevan Tara Building, Parliament Street New Delhi - 110 001</p>
<p><b>9. Smt. D. Mukherjee</b> Member Secretary Delhi Pollution Control Committee</p>	<p><b>10. Mr. N. P. Singh</b> Min of Non Conventional Energy Sources Government of India, New Delhi - 110 001</p>
<p><b>11. Mr. S. V. Bhave</b> Joint Secretary - Dept. of Industrial Dev't. <i>Ministry of Heavy Industries &amp; Public Enterprise</i> 180, Udyog Bhawan, New Delhi - 11 001 Tel. : 301 1745</p>	<p><b>12. Mr. Anil Razdan</b> Joint Secretary Ministry of Power Shram Shakti Bhawan, New Delhi Tel. : 371 4009</p>
<p><b>13. Dr. B. Sengupta</b> Member Secretary <i>Central Pollution Control Board</i> Parivesh Bhawan, East Arjun Nagar Shahadra, Delhi - 110 032 Tel : 221 7078 / 243 1655</p>	<p><b>14. Dr. D. D. Basu</b> Sr. Environmental Scientist <i>Central Pollution Control Board</i> Parivesh Bhawan, East Arjun Nagar Shahadra, Delhi - 110 032 Tel : 222 5792</p>
<p><b>15. Mr. M. S. Shiva Subramanian</b> Economic Advisor Dept. of Chemicals <i>Min. of Chemicals &amp; Petrochemicals</i></p>	<p><b>16. Mr. Dilip Biswas</b> <i>Chairman - Central Pollution Control Board</i> Parivesh Bhawan, East Arjun Nagar Shahadra, Delhi - 110 032 Tel : 221 7078 / 243 1655</p>
<p><b>17. Mr. Debashish Majumdar</b> Director (Technical), IREDA Core - 4A, India Habitat Centre Lodi Road, New Delhi - 110 003 Tel. : 468 2201, Fax 468 2207 E-mail: <a href="mailto:d.majumdar@iredahtd.com">d.majumdar@iredahtd.com</a></p>	

## ANNEX B

---

### Pankaj Bhatia Bio Information

#### PANKAJ BHATIA

Pankaj Bhatia is a Business and Climate Change Associate in WRI's Sustainable Enterprise Program (SEP). Mr. Bhatia is working on several projects in the area of climate change: GHG Protocol Initiative, WRI's CO2 Emissions Reduction Commitment and SafeClimate.Net. He is also working to develop a BELL (Business-Environment Learning and Leadership) program for India.

Mr. Bhatia is one of the project leaders of the GHG Protocol Initiative. He was involved in the writing and review of various chapters of the GHG Protocol Corporate Accounting and Reporting Standard -1st Ed. He also leads the review and development of the calculation tools of GHG Protocol and coordinates a task force on the value chain operational boundaries of the GHG Protocol. Recently Mr. Bhatia has started work on the organization of structured feedback process for the road testing of corporate module by 10-15 companies' worldwide and development of the 2<sup>nd</sup> edition of corporate module.

WRI in its effort to 'walk the talk' has launched its own CO2 commitment project that includes developing WRI's CO2 inventory, setting its reduction targets and preparing its offset project. Mr. Bhatia is one of the project leaders of the CO2 commitment project. He provides strategic, policy and technical guidance in the design and implementation of the project, including its calculation tools.

From 1998 to 2000, he was vice president of Tata Energy & Resources Institute, a not-for-profit research organization based in Arlington, Virginia and affiliated to Tata Energy & Research Institute (TERI), New Delhi, India. From 1993 to 1998 he served at TERI on various projects related to implementation of the Montreal Protocol in India, and development of environment policy for technology transfer and capacity building in Indian industry.

Mr. Bhatia has authored and presented several papers and publications in various national and international conferences on topics related to his project work accomplished at TERI and WRI. His recent peer reviewed paper was published in ASHRAE Transactions (1999) titled Development of energy efficiency standards for India.

Mr. Bhatia holds Masters in process engineering from the Indian Institute of Technology, Delhi and Bachelors in chemical engineering from the Institute of Technology, Banares Hindu University, Varanasi, India.