United States Environmental Protection Agency

Office of the Chief Financial Officer

ENVIRONMENTAL FINANCIAL ADVISORY BOARD MEETING

Meeting Summary

March 10-11, 2008

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Environmental Financial Advisory Board Meeting

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Environmental Financial Advisory Board (EFAB)

EFAB OPEN MEETING

March 10-11, 2008

Meeting Summary

***EFAB Members Present*:**

- **A. James Barnes**, Chair, Professor of Public and Environmental Affairs, Indiana State University, Bloomington, IN
- **Terry Agriss**, President, TAgriss Advisory Services, New York, NY
- **John Boland**, Professor Emeritus, The Johns Hopkins University, Baltimore, MD
- **George Butcher**, Managing Director, Municipal Finance, Goldman, Sachs & Co., New York, NY
- **Donald Correll**, President and CEO, American Water, Voorhees, NJ
- **Michael Curley**, Executive Director, The International Center for Environmental Finance, Towson, MD
- **Rachel E. Deming**, Partner, Scarola Ellis LP, New York, NY
- **Kelly Downard**, Chairman, Louisville Metro City Council, Louisville, KY
- **James Gebhardt**, Chief Financial Officer, NY State Environmental Facilities Corp., Albany, NY
- **Steve Grossman**, Executive Director, Ohio Water Development Authority, Columbus, OH
- **Scott Haskins**, Vice President, Global Water Business Group, CH2M Hill, Bellevue, WA
- **Keith Hinds**, Financial Advisor, Merrill Lynch, Albuquerque, NM
- **Langdon Marsh**, Fellow, National Policy Consensus Center, Portland State University, Portland, OR
- **Gregory Mason**, Assistant Executive Director, Georgia Environmental Facilities Authority, Atlanta, GA
- **Karen Massey**, Deputy Director, Missouri Environmental Improvement and Energy Resource Authority, Jefferson City, MO
- **Lindene E. Patton**, Senior Vice President and Counsel, Zurich North America, Great Falls, Virginia
- **Cherie Collier Rice**, Treasurer and Vice-President of Finance, Waste Management, Inc., Houston, Texas
- **Helen Sahi**, Director, Environmental Services Department, Bank of America, Hartford, CT
- **Dr. Andrew Sawyers**, Program Administrator, Maryland Water Quality, Financing Administration, MD Department of the Environment, Baltimore, MD
- **James Smith**, Environmental Finance Consultant, Bozeman, MT
- **Steve Thompson**, Executive Director, Oklahoma Dept. of Environmental Quality, Oklahoma City, OK
- **Greg Swartz**, Vice President, Piper Jaffray & Co., Phoenix, AZ
- **Dr. Jim J. Tozzi**, Director, Multinational Business Services, Inc., Washington , DC

- **Justin P. Wilson**, Partner, Waller Landsden, Nashville, TN
- **John Wise**, Environmental Finance Consultant, Middletown, CA

***EFCN Members*:**

- **Mark Lichtenstein**, Director, Syracuse Center of Excellence in Environmental and Energy System, Syracuse, NY
- **Gerritt Knaap**, Exec. Director, National Center for Smart Growth Research and Education, College Park, MD
- **Jeff Hughes**, Director, EFC, U. of North Carolina, Chapel Hill, NC
- **Kevin O'Brien**, Executive Director, Great Lakes EFC, Cleveland State University, Cleveland, OH
- **Heather Himmelberger**, Director, EFC, New Mexico Institute of Mining and Technology, Albuquerque, NM
- **Sarah Diefendorf**, Director, EFC, Dominican University of CA, San Rafael, CA
- **William Jarocki**, Director, EFC, Boise State University, Boise ID

EPA/EFS Staff and Management and Expert Witness

- **Stanley Meiburg**, EFAB Designated Federal Official (DFO), National EPA Liaison, Centers for Disease Control and Prevention, National Center for Environmental Health/Agency for Toxic Substances and Disease Registry Atlanta, GA
- **Vanessa Bowie**, Director, Environmental Finance Staff, Washington, DC
- **Alecia Crichlow,** Environmental Finance Staff, Washington, DC
- **Susan Emerson,** Environmental Finance Staff, Washington, DC
- **Vera Hannigan,** Environmental Finance Staff, Washington, DC
- **Timothy McProuty,** Environmental Finance Staff, Washington, DC
- **Pamela Scott,** Environmental Finance Staff, Washington, DC

US EPA: George Ames, Jordan Dorfman, Kit Farber, Robert Hall, Bill Hanson, Chuck Kent, Greg Madden, Bob Maxey, Marcia Mulkey, Dale Ruhter, Paul Shapiro, Diane Saenz

Other Guests:

- Sue Briggum, Waste Management
- Jack Kartez, EFC, Region 1
- Shellie C. McClary, Oklahoma, Dept. of Environmental Quality
- Casey Massino, ASRCMS
- Peter B. Meyer, EFAB Expert Witness
- David A. Miller, EFAB Expert Witness,
- Robert Montgomery, Exponent, Inc.
- Nicollete Mueller, EFC, Syracuse University
- Sara Pesek, EFC, Syracuse University
- Richard Swanson, EFAB Expert Witness
- Joanne Throwe, EFC, University of Maryland

- Charlotte Tuckes, BNA
- Robert Weaver, Kelly & Weaver

Day 1-Monday, March 10, 2008 ***(1:00 p.m.)***

Introductions/Meeting Overview

Stan Meiburg, EFAB Designated Federal Official (DFO) welcomed members and guests to the Environmental Finance Advisory Board (EFAB or the Board) open meeting in Washington, DC. He acknowledged the members who were not able to be present for personal and business reasons.

James Barnes, Chair of EFAB, and Professor of Public and Environmental Affairs, Indiana State University, welcomed Board members, EFCN members, and guests and said that he was impressed with the work and commitment of the Board.

DFO Meiburg reviewed the meeting agenda. On Monday ***John Wise, Environmental Finance Consultant***, would discuss EFAB's collaboration with NACEPT. ***Granta Nakayama, Assistant Administrator, Office of Enforcement and Compliance Assurance*** would review EPA's National Enforcement Strategy, which would be followed by EFAB Workgroups Report Outs. On Tuesday, reports would be given on the Environmental Finance Center Network Update, Sustainable Water Infrastructure, Region VII's Satellite EFC, Climate Change and EFAB Workgroups Reports for Financial Assurance and Innovative Finance Tools.

EFAB Collaboration with NACEPT- John Wise

Over the years, NACEPT and EFAB have collaborated on several projects of mutual interest. These collaborations have proved to be immensely valuable by enriching the substance of the reports; and they have proved the utility of cross-collaboration among various Advisory Committees, thus giving EPA enhanced value from its investment in the advisory process.

There are two examples of recent participation which illustrate the process. The first example emerged when EFAB was attempting to examine sustainability work at EPA. We realized that such an effort was pushing the boundaries of EFAB's charter in that much of the sustainability thesis did not directly involve environmental finance.

However, NACEPT was doing a report on sustainability-related stewardship work and Stan Meiburg mad the connection.

Stan brokered a discussion with NACEPT and this led to an EFAB collaboration with NACEPT – which has involved John Wise joining the NACEPT sub-committee marrying stewardship and sustainability. EFAB's environmental finance expertise was infused into NACEPT's exploration of stewardship. The result was a greatly enhanced report to the Administrator. The report is *"Everyone's Business: Working towards Sustainability through Environmental Stewardship and Collaboration"*.

The second example involved an invitation from NACEPT for EFAB assistance on a report involving venture capital and technology promotion. John Wise has served as the liaison providing EFAB input into the NACEPT sub-committee on environmental technology.

This NACEPT sub-committee has been pursuing/conducting a series of interviews with the venture capital community looking at, among other things, how the venture capital community views EPA. Bill Reilly, Hank Habicht, John DeVillars, Winston Hitchcock, Eric McPhee, and John Day are among the experts who have been interviewed.

The project report is being authored by the NACEPT sub-committee and will be rolled up through the full NACEPT into a final product.

This project has been on a fast rack and will conclude at the end of March with a report to the EPA Administrator. The report is *"EPA and the Venture Capital Community: Building Bridges to Commercialize Technology"*. Again, value was added by the infusion of EFAB expertise into the work of NACEPT.

EFAB members raised the question as to whether there were any cross-overs/connections between this particular effort and EFAB work. Some EFAB members felt that the metrics (both hard and soft) that drive venture capital decisions are/can be the same as those used in making other financial decisions, and saw a real relationship to the Board's EMS work.

Examples of metrics presented: 1) *Hard Metrics* – rate of return, economic value of production, market size, market penetration, growth, breakthrough technology; 2) *Soft Metrics – (used by public entities)*, transparency, sustainability, social responsibility.

The EFAB concluded that based on these two successful collaborations, further opportunities for cross-collaboration among advisory committees should be explored.

EPA's National Enforcement Strategy

DFO Meiburg or Chair Barnes introduced. ***Granta Nakayama, Assistant Administrator, Office of Enforcement and Compliance Assurance,*** who would provide an overview to EPA's National Enforcement Strategy.

OECA has 3400 employees across all of EPA – at headquarters and the ten Regional offices. OECA manages its own FACA advisory committee, the National Environmental Justice Advisory Committee (NEJAC). OECA responds to NEJAC reports and letters in writing and on its EPA website. Regarding financial assurance-related issues, there have been a number of high profile bankruptcies, in particular, the ASARCO case and its $1 billion plus claim. There have been some financial assurance success stories involving sites in Colorado and Virginia (Lucent). OECA believes that strong financial assurance requirements provide incentives for companies and others to operate in the cleanest possible manner.

It is important to remember that OECA does not make the regulations, it enforces them. The importance of strong enforcement is that without it compliance often comes into question. The Peoples Republic of China is an example of this fact. China has great regulations, but no enforcement. This leads to poor compliance and serious pollution. China follows a 0,1 model. The government either does nothing or it shoots the person at the top held responsible for the problem.

OECA has re-listed financial assurance as one of its national enforcement priorities for the period covering 2008 to 2010. There is a lot of support for this priority from the States, especially from the Association of State and Territorial Solid Waste Management Officials (ASTSWMO). OECA is working hard on improving its staff's (EPA's) cost-estimation capabilities.

OECA has reviewed 1300 CERCLA facilities/sites in 28 States with over $2 billion dollars in potential financial assurance obligations. For RCRA-related facilities, OECA has reviewed 278 facilities with $1.5 billion in potential financial assurance liabilities. Finally, OECA has reviewed 2000 RCRA TSDs with $2.8 billion in potential liabilities. OECA is working hard to deal with the uncertainties associated with cost-estimations. His office's goal is predictable, stable, and strong enforcement. OECA wants to create/inform, a level playing field for regulated entities. OECA focuses on the regulations as written, it does not make regulatory policies. He is proud that the Office has achieved over $ 40 billion in injunctive relief.

Questions and Comments *Terry Agriss* commented that some the members felt strongly about enforcement and the national assurance tests. The agency has asked EFAB to assist them on how to take advantage of the State Revolving Funds (SRFs). The key point is how to get people to take advantage of the assurance that is available, and our response is usually through enforcement.

Rachel Deming: What are the percentages of use among the various financial assurance instruments?

Lindene Patton: Would it be possible to get general information on financial assurance use related to bankruptcies? OECA is willing to share what they can re: information in the public domain and general overview percentages, gross dollar amounts, etc. There is a lot of confidential information involved in OECA financial assurance-related work.

Cherie Rice: Is there any variability between the States in EPA's 28 State review? Yes, some States like Florida are already working on these issues, while others are lagging.

With respect to the infrastructure issue, *Mr. Nakayama* said he was surprised when he told municipalities that they were out of compliance and needed to upgrade their sewer system and even though they were aware of this, they had not thought about using SRFs or other available state funds.

Mr. Nakayama invited members to let him know, if they had some issues where the Agency was off the track.

Welcoming Remarks

Lyons Grey, EPA Chief Financial Officer and former Chair of EFAB, introduced ***The Honorable Stephen L. Johnson, EPA Administrator,*** by stating his admiration for difficult decisions made by the Administrator's to do what was best for the Nation's health and the environment.

Administrator Johnson acknowledged the leading roles of EFAB in the Nation's' priorities including paying for sustainable water infrastructure and helping EPA identify smart solutions to the Nation's environment problems. The capital costs of needs for clean water and safe drinking water amount to $4-5 billion dollars. EPA's $7.1 billion dollar budget is not going to solve the huge problem. He thanked the Advisory Committee, the staff, and *DFO Meiburg* for their time and efforts and their portfolio projects.

One of EPA's priorities is the Nation's water infrastructure. At the budget hearings on Capitol Hill, EPA discussed the importance of Private Activity Bonds or Water Enterprise Bonds as a way of addressing the financial needs for infrastructure. EFAB has made an important contribution with the emphasis on SRF loan funds to use dollars more efficiently.

The Administrator appreciated EFAB's work with local governments and groups. It is important when the independent advisory committees, such as the NACEPT, the Local Government Advisory Committee (LGAC), and EFAB have been able to make connections with each other. EPA works hard to act on the advisory committee's recommendations. On a number of issues, such as sustainable financial approaches, equitable cost allocations, collaborative governance models, recommendations have been made by EPA advisory groups. EFAB is helping EPA and the Nation to accelerate environmental protection while maintaining economic competitiveness.

Administrator Johnson recognized the new EFAB Board members, *Karen Massey* and *Steve Thompson*, who has had decades of experience with states. He thanked *Steve Grossman, John Wise, Jim Smith*, for their service to the Board and provided them with plaques of appreciation. He also thanked two other members, who have helped EPA immensely, but who were unable to attend due to illness: *Steve Mahfood* and *Senator Pete Domenici*.

EFAB Workgroups Report Outs

Environmental Management Systems (EMS)

Rachael Deming, Chair, *{Not on microphone)* said the report on Environmental Management Systems is almost in final form. The Workgroup had been meeting for 2 ½ years and had determined the important questions that to help the agency move forward. The EPA Office that sponsored the workgroup, the Office for Policy, Economics and Innovation, has worked closely with the workgroup. The original charge was: *How can we find the value of EMS to the financial markets?* Since the financial markets did not know what an EMS was, education was needed on some components of management systems, such as verification of environmental performance, and identifying which components could be measured. Based on comments from a workshop held in June 2007 and Board discussions, a draft report was developed. A copy of the report entitled *Environmental Management Systems and the Use of Corporate Environmental Information by the Financial Community*, was in the Board workbooks.

EPA's comments were received and reviewed by the Workgroup, the content of the report was agreed upon, and the report would be transmitted to the agency within the next month. The EMS report should be available at a EPA workshop being held in June 2008. The next draft would incorporate EPA's comments and the Workgroup's minor revisions. Recommendations would not be changed, except for slight revisions in Recommendation 1, due to EPA's objections to a leadership role. The recommendation would state that the leadership role is not mandatory, but that EPA should work with financial markets to identify categories of data for financial markets to measure.

DFO Meiburg observed that the EMS Workgroup's purview had expanded to focus on how to identify indicators that would be of value to those who do assessments of a wide variety of financial instruments, such as tools that leverage funds and reward companies engaged in good environmental performance. There is some tension between evaluating corporate performance based on environmental performance rather than solely on financial indicators. EPA should encourage companies to look at the long-term benefits.

Comments and Questions

Board comments included the following:

- On recommendation #5, EPA's collaboration and coordination with other agencies, such as state environmental regulators, OSHA, and SEC is important.
- The focus has changed over time, so now we are looking at the return on investments and the monetary benefits of EMS.
- In the early days of environmental protection, there was a lot of fear in the agency about the cost-benefit analysis, but the agency has found that the benefits far exceed the costs in many arenas

DFO Meiburg said that after edits from the today's workgroup comments, the final version should come to the Board by the end of the month. He proposed that the Board receive the report by email and indicate within a couple of weeks their approval, so he and *Chair Jim Barnes* can sign and send it to EPA *Administrator Johnson*.

Leveraging the State Revolving Funds (SRF)

DFO Meiburg stated that Report on Leveraging SRF funds was the most extensive piece of analytical work that had come before the Board during his tenure. The Final Report entitled "*Relative Benefits of Direct and Leverage Loans in SRF Programs"* is close to being ready.

George Butcher, Chair of the Leveraging SRF Workgroup, praised the work of *Jim Smith* and *Jim Gebhardt* on the aggregation of the data; and *Terry Agriss* for the overview and executive summary. The conclusions were on Page 11 of the Report. Both direct loan and leveraged loan programs have been successful in making loans with greater value than the federal capitalization grants. Direct-loan states can increase their retained earnings over time, if they use a separate portion of their capital to make loans, leverage those funds, and allow retained earnings to grow capital over time. The federal government can assist states to operate more efficiently by allowing more flexibility in the design of individual state programs. Another suggestion involved allowing draws of capitalization grants, without regard to the expenditure of SRF funds, for project costs, and to interpret the perpetuity rule in a dynamic, rather than a static way, based on annual year-end results. This recommendation will be clarified in the final report.

The final recommendation for future study by the Workgroup is whether a different approach to investing SRF equity would enhance the ability of SRFs to grow equity, meet long-term program demands, and become sustainable. Some additional work is needed on the report in terms of the discussion of the data, the characteristics of states that made SRF loans, and the perpetuity rule. *Mr. Butcher* added that the changes could be completed so that a final plan could be circulated by the end of the month.

Greg Swartz said the data on the characteristics and commonalities of states that make a lot of SRF loans needs to be summarized. For example, there is a direct correlation between how many loans a state is producing and the presence of a finance authority in the day-to-day decision-making. Language would be added regarding a new measure, termed the benefit/capital ratio, comparing the percentage of financial assistance to the percentage of capital allocated to derive that financial assistance. With some of the SRF innovative financing techniques, they could break the one-to-one ratio and actually generate benefits at a higher rate than the percentage of capital committed.

Questions and Comments

Jim Tozzi commented that this version of the report was more understandable than the last version and provides a good idea of how leveraging works. The EPA transmittal letter should focus on the 4th recommendation because it states an explicit action by EPA and addresses closing the gap. *John Wise* commented that this report should be sent to the House Committee on Transportation and the Accounting Office that advised on the creation of a Clean Water Trust Fund.

DFO Meiburg noted that the report language has shifted from recommendations to conclusions. The statements that we have collected a tremendous amount of data, given thorough review to the types of programs, and have concluded that compared to direct loan programs, leveraged programs have the benefit of permitting more loans to be funded with the same amount of equity, are a very important, but need to be stated more strongly. The Board discussed this issue further as follows:

- EPA could take more of a catalytic role in pushing the idea of leveraging funds than they have in the past.
- Talking to the Environmental Council of States (ECOS) might bring about a dramatic policy change, rather than talking to the state governors' staffs via the Regional offices.
- For state programs that have not been leveraging, the language should be stronger in stating the efficiency of SRF leveraging.
- The focus could be on environmental groups and regulators, associations of state finance officers and state legislatures, who would look at the SRF as a financial program, not just an environmental program.
- This report provides the impetus for state directors to ask staff members to provide them with detailed analyses of why leveraging would be or not be appropriate for their state.
- To people who run the non-financial programs this information could be intimidating.
- EPA should deal with this at the state level instead of at national level, because there are several states that need to be encouraged to do leveraging.

Jim Tozzi asked who would be presenting the report to the groups just mentioned. Does the agency have the time and personnel to do this? Would the people who wrote this report be available on a continuing basis to EPA staff as they make presentations?

An extensive and complex discussion ensued on leveraging ratios and subsidies. *Michael Curley* said that in a healthy bond market and in well-run water and wastewater utility programs, the leverage ratio for financial guarantees from insurance companies was 100 to 1. So theoretically Rhode Island's ratio of 4.94 could be multiplied by 100 to leverage their equity. *Mr. Curley* thought that there is more than enough money in the leveraging program to finance all the gaps. However, as long as local governments pressure the state legislatures not to give up subsidies, the subsidies will never go away and there will always be a gap.

Jim Gebhardt said if you do a guarantee you do <u>not</u> have to give up subsidies. Money in equity accounts is growing. Earning and subsidies to communities are still being provided. For example, in New York the money in the equity account of about $300 million is growing. Using the financial ratios that apply to bond insurers, which exceeds 100 to 1, this equity money could do $30 billion of guarantees with an AAA rating. However, this is limited by statute.

Jim Gebhardt added that the feature of the SRF program that buys political inducement is low-cost loan approval. New York is rolling out financial guarantees to water and sewer programs. Communities are offered AAA financing in the market, with the power of the SRF guarantee. The community projects would be kept on the intended use plan where they could compete in future years for additional assistance.

DFO Meiburg noted that in the past the Board did not take a position on the issue of the amount of capitalization grants, because this was a political position; even though the Board's objective is to help EPA and the Nation to make sure that Federal dollars are working as hard as they could. This report did not attempt to address the full range of instruments, such as guarantees, that might have increased the leveraging rations per se, but was rather a more modest, empirical approach of looking at the past experience of leveraging of funds and see what could be learned. *Dr. Tozzi's* question was: *How forceful does the Board* *want to be in suggesting particular strategies to EPA to adopt?* The question for the Board is whether to adopt the report as it is or make a stronger statement to EPA.

Other ideas brought out in the discussion included the following:

- In the performance partnership agreements with states, they could put an analysis of leveraging in their work plans of why leveraging does or does not work.
- Regional Directors, after reviewing the report and seeing the amount of leveraging that is being used, could talk to the State Directors and point out the differences between states, especially if they are complaining about the amount of their allocation under the Clean Water Trust Fund.
- The report goes to the heart of how we can take existing resources and use them more effectively. However, SRFs are not a sustainable source of revenue.
- For states that do not leverage their credit, more discussion of the options and tools that work would be helpful.
- One of the best parts of the SRF legislation is that it gives great latitude to the states on how the SRFs could be designed. EPA cannot tell the states how to operate the SRFs.

In regard to the tone of the report and strength of the language to EPA, there were differences of opinion, as follows:

- The report should be stronger in telling EPA what the Board's position is on a financial matter, because it may be hard for EPA to advise us on what they want because the Board is independent.
- EPA should use its authority to recommend or disseminate the information.
- EPA's role would be to get information into the hands of people who want the information, not to tell them what they ought to be doing.
- The report should state that this is basically a financial program or tool, not an environmental program per se.
- An education program is needed for state legislators, who do not understand the concept of leveraging.
- From the states' perspective, the message would be better received if coming from the Board than from EPA.
- The intrinsic tension between subsidies and leveraging needs to be explained in the report.
- The document could point out the ratios and relationships between grants and the tax-exempt status of SRF bonds and the differences between private and publicly-owned water treatment facilities.
- The gap is real and if states do not leverage, then they would ask for more appropriations from the federal government.
- The report should strengthen EPA's understanding of leveraging, especially the regional grants management staff.

DFO Meiburg asked whether the subsidy issue was something to address as a follow up action to this report or to include this issue in the report which did not seek to cover the relative merits of subsidies. Several members responded that subsidies should not be part of the report.

John Boland summarized the discussion in that everyone agrees that this report needs to be put into the hands of decision-makers at the federal, regional, state, and local levels. In the discussion of why some states leverage and some do not, we imply that it is either they don't know how or don't want to do it, but they may not need to leverage. It could be that the capitalization grant is too large or that there is not enough demand for the money, which is a bigger problem.

DFO Meiburg summarized the discussion as follows:

1. There is consensus that the report needs to be disseminated.
2. The report has great value and compiles very important information that is not pulled together in other reports.
3. The real debate is how firmly the Board wants to make its recommendation to EPA. The main idea is that EPA should not appear to be heavy-handed in the ways that the federal statute does not support.
4. The message of the report should be clear that there are ways to make the existing funds work harder than they do now.

Ms. Agriss said that changes from their workgroup and today's discussion would be incorporated in the next version. The revised version would be electronically circulated to the Board, ask for last comments, incorporate them as necessary, and complete the final report by the end of the month. *DOF Meiburg* added that if the electronic process was not workable, they would try another mechanism, such as a conference call.

Several members suggested that the cover letter could deal with some of the differences and discuss the policy items. The cover letter could suggest to the Administrator that the insights from the Board could be of use to him in explaining to various audiences how to use leveraging to obtain more funds for infrastructure financing.

Bill Jarocki commented he would like to take the report straight to the state administrators for the EFC. Boise State University has some credibility and has been teaching communities that the SRF is the first place to look before trying to get earmarked funds or grant funds which are diminishing. He has four states in his region that do not leverage, and their expectations of getting grants need to be lowered.

DFO Meiburg asked for other comments. He commended the workgroup for the hours they spent and making the report more understandable. He commended *John Wise* for suggesting how the Board could work with other federal advisory committees. After hearing from *Granta Nakayama*, Assistant Administrator, about enforcement and from *Administrator Johnson*, it should be obvious that the financial aspects of infrastructure have been receiving a lot of attention at EPA.

Session ended at about **4:00 p.m.**

Environmental Financial Advisory Board Open Meeting

Day 2 - Tuesday, March 11, 2008 **(9:15 a.m.)**

EFAB /EFC Members Present: The same Board members were in attendance as on Day 1.

EPA: Robert Hall, Chuck Kent, Bill Hanson, Greg Madden, Marcia Mulkey, Dale Ruhter, Bob Maxey, Mike Galbrith

Other Attendees: Sue Briggum, Waste Management; Brenda Groskinsky, EPA Region VII; Jack Kartez, EFC-University of Southern Maine; Jeff Kinney, BNA; Casey Massino, ASRCMS; Peter Meyer, EFAB Expert Witness; David Miller, EFAB, Expert Witness; Robert Montgomery, Exponent; Nicollete Mueller, EFC- Syracuse University; Shellie McClary, Oklahoma Dept. of Environmental Quality; Sara Pesek, EFC- Syracuse University; Tom Purcell, PI; Joanne Throwe, EFC- University of Maryland

Opening Remarks

DFO Stan Meiburg opened the meeting and reviewed the day's agenda including, an EFC Network Update, Region VII's Satellite EFC, Climate Change, and EFAB report outs. The microphone problem of the previous session was noted.

Environmental Water Infrastructure (EFC) Network Update

Jeff Hughes, President, EFC Network and Director, EFC University of North Carolina, provided an update on the EFC Network including activities, methods of operation, and the relationship to Universities. The Network budget varies from $4 to $5 million dollars a year, depending on external projects. EPA's core grants have not increased over the last few years, so these funds have to be supplemented from outside sources. The Network competes for grants with other national associations. Many EFCs have contracts with state and local governments.

Staffing includes engineers, a geographer, a sociologist, an ecologist, an economist, and several public administration officials. There are 45-50 full-time employees across the Network. The way university students and EFC staff are integrated varies from Center to Center, but includes project staffing, teaching academic programs, and providing experience for future employment in environmental finance. Affiliations can include inclusion in large national programs, such as the Centers of Excellence and the National Center for Smart Growth. *Mr. Hughes* then asked EFC Directors to report on some EFC projects.

Sarah Diefendorf, Director, EFC, Dominican University of California, reported that the San Francisco bio-diesel or bio-fuels program was initiated without having to deal with sustainability issues, such as virgin feed stock and agricultural land use, because they were looking at how to take waste oils from restaurants and convert them to fuels for use in city automobiles. However, San Francisco was not able to overcome the barrier of bio-diesel being categorized as "diesel." This is a problem because of the multiple agencies involved in regulating storage, flammability, hazardness, waste water issues, and transportation and collection of diesel fuels. EPA asked EFC-SF to hold a roundtable of all the interested parties to discuss the problems. The issues included the development of bio-diesel standards, a non-partisan information clearing house, a cost effective business model, and how to increase financial resources.

William Jarocki, Director EFC, Boise State University, discussed a new tool described in: *A Direct Response to Demand for Training*. The tool was developed in response to demand from very small communities. Over the years, training on the same subject was requested repeatedly, so the EFC decided to use the Internet where people could get training-on-demand by appointment. There is little expense to the EFC, because there are no travel costs. The web site has registered users, so they can broadcast the training to people all over the U.S, and the training can be recorded and replayed. Other trainers can use the mechanism as well, and EFAB members can make presentations.

Mark Lichtenstein, Director of EFC, Syracuse Center of Excellence in Environmental and Energy Systems, said student activity is essential at the Centers. Students brought together the business, public administration, and environmental schools to discuss sustainability. In the Lake Ontario coastal zone, the Center is working with the USDA on the Four Pillars of Sustainable Infrastructure for water and wastewater. A new concern is about the pharmaceuticals in the drinking water.

In his dual role as the Chief Operating Office for the Syracuse Center of Excellence, he reported that the CE leverages resources for building a program of sustainable development in communities. The Center helped to write the $5000 grant for a program with the American Institute of Architects: *A Sustainable Design Assessment Team Program*. A national team goes to the community and evaluates the situation based on sustainability issues. The Center facilitates the Steering Committee and other meetings for the program.

One outcome is a $100 million-dollar schools project that transforms each building into green buildings and involves the public in decision-making. The U.S. Green Building Council was involved in the process and applied for grants for Leadership on Energy and Environmental Design (LEAD), which involves rating an entire community as a green community. Another program is a Low-Income, Green, Affordable Housing Summit, which brings in code enforcement officers and builders to learn how to build this type of housing. Syracuse has a serious problem with storm water and the city is looking at green infrastructure solutions rather than facilities. The Mayor of Syracuse has said he would offer a property tax amnesty program, so if people re-model or build a house using LEAD standards, depending on the rating, then could receive several years of tax amnesty.

Questions and Comments

Jim Barnes, Chair, noted that each EFC was pioneering a whole new portfolio of EFC activities. He asked: What are the EFCs relationships to the EPA regional offices?
The responses from the Network Director and EFCs varied by Center:

- Overall EPA's core grant goes to regions and then to the Centers.
- The Region 9 EFC Center in California is located in the Waste Division. They work closely with the Region in terms of the projects funded by grant money.
- In Region 10, the project officer is an advocate for the EFCs and explains EFCs activities to the agency staff. The EFC is geographically far from the headquarters.
- For Region 7's satellite office, discussions involve activities in the region, and the project manager is invited to all of their events.

DFO Meiburg thought that some missionary work still needs be done in some Regional Offices, even though the awareness of the EFCs and the power of the Network have increased over time. *Jeff Hughes* described tomorrow's workshop as a dialogue with EPA. Requests have come from various EPA divisions and headquarters that have an environmental finance challenge and they want to learn more about the EFC Network.

Lindene Patton thought that all of the EFCs should be encouraged to leverage the resources by using Internet training-on-demand. From her industry's perspective, a LEAD-certified building is not necessarily sustainable, even though it may be green. From a climate perspective, there is a missing link in the dialogue in terms of the economic and financial analysis. The questions are: How do you make buildings disaster-resilient? And how can we get LEAD to agree that points should be given for disaster-resilience? Short-term expenses are very high, and a sustainable community that survives extreme weather events needs to be evaluated on a long-term basis. She asked if the EFCs could participate in that dialogue in a different way from private insurers.

Mark Lichtenstein said he was going to meet this afternoon with the President of the U.S. Green Building Council and he would bring up this issue. In New Orleans, we will evaluate the building of the lower 9th ward in terms of LEAD. *Ms. Patton* suggested a dialogue with *Mr. Lichtenstein*, because there are many possibilities, such as roof attachments and restructuring, that improve both energy efficiency and the structure. Zurich North America has data on the building in that region that could be shared.

Sustainable Water Infrastructure

DFO Meiburg introduced ***Ben Grumbles, Assistant Administrator, Office of Water, EPA***, who had asked for the Board's recommendations in the area of SRFs, water use, sustainable infrastructure and watershed management and finance. *Mr. Grumbles* has worked with congressional and intergovernmental relations on water resources, clean water, and other environmental issues.

Mr. Grumbles underscored the Administrator's priority for sustainable water infrastructure, financial management, and security. The Administrator wants to change the way Americans view and manage their water infrastructure. In EFAB's report on Leveraging, he is looking for aggressive recommendations about advancing leveraging. Michael Deane is working on state-matched bonds with the Office of Budget and Management and the Office of the Inspector General.

EFAB's engagement with private-public partnerships is important. His office has worked with Congress and the public to remove obstacles to private water enterprise bonds. It is time to review the 1992 executive order to see how EPA could remove potential barriers for communities that want to promote private grants or public-private partnerships. *Jim Hanlon's* office has developed options for the Administrator about innovative financing. Discussions have been held with the Treasury Department on private activity bonds. The Treasury is supporting revisions to the tax code and will work with Congress to remove the state volume cap on private activity bonds.

Questions and Comments

In response to a question about green initiatives, *Mr. Grumblse* noted that in mid January EPA held a national forum on green infrastructure research as a component of the green movement, because this is a priority area related to climate change. A broad partnership was initiated by the Administrator with a MOU last year with state and local water agencies, low-impact development centers, and the National Resources Defense Council (NRDC). Ideas included mimicking natural processes through vegetation, rain gardens, and rooftop gardens to reduce sewer overflows to better manage storm water. A strategy on building partnerships for green infrastructure financing was a key element. *Mr. Grumblse* also was interested in EFAB's position on watershed financing.

Sustainable water infrastructure actions require the enactment by Congress of the water enterprise bonds and the continuance of the green infrastructure movement. The EPA Wastewater management office is broadening its purview beyond storm water permitting and sewer overflow control. The concept is unifying, but it needs better definition and specificity. Everyone sees the value of green infrastructures in protecting the wetlands and watersheds by using alternative or softer path approaches. The government is interested in removing barriers to green infrastructure, whether they are national or local.

Comments from Board members included the following:

- In the Southwest, the topic of climate change and water includes water reclamation and re-use, surface water and ground water conjunctive use, storm water as a resource, water-trading, water-banking, water transfers, etc. which are not a part of EPA's mainline agenda of pollution control. The EPA Office of Water should assume a leadership role around sustainable water infrastructure future that can accommodate water resources.
- Private company products need to be developed to improve resiliency relative to power and independence in support of off-road structures. Off-road mechanisms are needed to create a level of resiliency to minimize business interruption in the event of severe weather. Water is different because there are unmanageable derailments and demand surges from severe weather events. Also, there may be a potential redistribution challenge. Financing is needed to encourage people to design new approaches related to distribution challenges.

- In the past, EFAB reviewed the use of tax credit bonds for water infrastructure financing, but did not favor this idea.
- Regulations on green infrastructure alternatives need to go beyond permits and consent degrees that focus on short-term outcomes and look at long term solutions.
- One aspect of being able to restore watersheds and provide coastal resilience is being able to pay for the ecosystems services that the natural systems provide. There may be a need for utilities and others to pay for land owners to provide ecosystem services as the farm programs do on conservation lands.

Mr. Grumbles responded to the various suggestions as follows:

- The National Water program at EPA is very much a part of the climate change discussion. One year ago, we set up a Task Force within headquarters and regions to develop a strategy for the national water program in response to climate change as related to other actions in the area of climate by the Office of Air Pollution, the Research Office and the Administrator's office.
- At a meeting with the directors of USDA, Interior, Army Corps of Engineers, and NOAA the role of water in climate change was about how we could change programs to mitigate greenhouse gases, adjust infrastructure sustainability and resiliency in coastal areas, and change water quality standards and wetlands permitting.
- In the Task Force Strategy, the key components are infrastructure, water efficiency, and advancing EPA's water-sense program, modeled on Energy Star, which focuses on the connection between water availability and water quality.
- The main idea is to take reasonable, scientific, and proactive steps regarding climate change, which won't require dramatic changes in the national water program, by working with water utilities on how they should be adjusting their programs related to climate change.
- When it comes to water quantity, availability and use, EPA is not a major player, but should be part of the discussion. In this era of increasing pressures on water supplies, we need a three-pronged approach to water such as the 3 Rs: reduce, reuse, and restore: *Reduce* through efficiency; reclaim and *reuse* water, such as re-charging aquifers and reclaiming grey waters, and indirect potable reuse; and the *restore* watersheds.
- Because of technical, management, and financial sustainability, states need work with their utilities to ensure that smaller rural ones that aren't sustainable on their own begin to consolidate. The agency just released a strategy on capacity development*: Providing Tools to Drinking Water Utilities* on the technical, managerial, and financial capacity development analysis that may lead them to consolidate with other utilities in the state.
- Under the Clean Water Act, the agency embraced the concept of centralization for secondary and advanced treatment, but in terms of wastewater, decentralization might work better.
- The Administrator's other priority in the water infrastructure arena over this year is to make the connection between water and energy efficiency to help utility managers by providing tools so they can do energy audits at the utilities to see how they can reduce energy consumption while still meeting the requirements of the Drinking Water Act.

In reference to tax credit bond, long-term solutions, and payments for green infrastructure, *Mr. Grumbles* responded that:

- The Senate Banking Committee is having a hearing on a proposal of Senators Dodd and Hegel on a national infrastructure bank which has a tax credit financing for projects of national import over $75 million dollars. There is a tax credit bond proposal for municipal utilities interested in desalinization, but private activity bonds are less expensive than tax credit bonds.
- On long-term solutions, the storm water permit writers on MS-4, Municipal Separate Storm Sewer Systems, are reaching out to work with states on developing MS-4 permit programs that accommodate green infrastructure approaches.
- EPA's Enforcement Office and the Office of Water collaborated on a memo to Regional Offices that the use of green infrastructure approaches could be a part of long-term compliance control plans and enforcement settlement agreements. For example, flexibility is needed in the schedules to implement green infrastructure. More time is needed for some communities to meet the Clean Water standards related to green infrastructure. The long-term strategies for sustainability for sewer overflows or storm water infrastructure are often the most expensive ones for communities.
- A new final rule is being issued with the Army Corps of Engineers on Wetlands Mitigation Banking that uses a market-based approach to help ensure ecologically successful compensatory mitigation for unavoidable adverse impact to wetlands. The concept of mitigation banks would allow credits and debits, in advance of the project, that will ensure ecologically sound wetlands restoration and protection.
- Market-based conservation is the concept at USDA. EPA supports the need for ecosystem services and the need to facilitate a market for them. Full-cost pricing is part of the pillar of sustainability. Ecological protection and restoration could have some system that embraces ecosystem services.

DOF Meiburg added that specific recommendations on some of EFAB's reports would include administratively allowing early withdrawals of capitalization grants to modify the federal interest in some clean water facilities. The Board is available to discuss their recommendations with *Mr. Grumbles* at any time.

EFAB Workgroups Report Outs

Sustainable Watershed Financing

Langdon Marsh, Chair, said they do not have an agreed upon charge from the Office of Water. Discussions have been held with EPA staff on specifying EPA involvement. Both Ben Grumbles and the Administrator made good cases on why we need to think more about ecosystems and how to finance them. Some of the $400-600 billion dollar gap could be reduced by green infrastructure and activities, such as payment for ecosystem services that are not connected with green infrastructure. An example is a swale or a wetland that provides services like flood control or water purification and retention. Other ecosystems services are performed by plots of land that are not infrastructure, such as riparian buffer strips for planting certain crops and forests that absorb water that flows into urban areas and prevent floods. Retaining and restoring ecosystems services is an economic good in itself.

In the last few years, discussion by the Forest Service and climate control advocates about measuring and marketing ecosystem services have not involved EPA, even though they involve replacing infrastructure investments. New York City is an example of reducing the gap by $6 million dollars by not having to build a big drinking water treatment plant. The country is going to have to figure our how to implement the TMDLs that have been established by court action or permitting over the last 10-15 years. Infrastructure by itself will not do it.

Some of the items discussed in the workgroup yesterday included:

- A way to structure permitting and enforcement actions to make long-term investments. For example, a Seattle guidebook puts all large investments to the test of triple-bottom line life cycle assessments to see if the best way is through infrastructure.
- Smart Growth decisions could include ecosystem services.
- There is no good way of measuring or valuing ecosystem services.
- Three possible issues for the Workgroup were listed in a handout.

Questions and Comments

Lindene Patton said she does not necessarily value a resource for upfront allocation, but rather comes up with natural resource damages on the inverse side to value the restoration. She observed that EPA has in their contract a highly qualified group, the Industrial Economics Group that has done an extensive amount of study on natural resource damage valuation that might be applied to these problems. She has a copy of their latest review of these types of valuations, and the Workgroup could incorporate that data.

DFO Meiburg said an organizing principle for the charge would be to look at what are the financial aspects to green infrastructure that may or may not be being captured by existing financial programs. *Mr. Marsh* agreed and said that wetlands litigation might be one method for paying for ecosystems services, and green infrastructure is another way, both of which could be financed by traditional means. *DFO Meiburg* added that every building ought to be treating its own water and waste water.

John Wise made a suggestion on item # 3 about the establishment of an Ecosystem Marketplace for the creation and exchange of credits in Federal and State programs. He suggested looking at the Chicago Climate Exchange and the protocols they have developed for measuring and determining available credits that could be traded and how this market itself sets a price for carbon credits. *Mr. Marsh* added that the Willamette River Partnership is trying to bring markets together and develop a unitary or a common unit of measurement that could be traded across programs.

Michael Curley said that the State of Pennsylvania is working on the trading of effluent credits. The use of SRF funds or guarantees with respect to effluent credits is not yet completed, but there is uninvested cash available that could be invested in credits, so the State Treasurer would be buying effluent credits.

Scott Haskins asked if there were gaps and barriers relative to financial management practices or valuation and allocation of costs and benefits to different parties. EPA's policies, metrics and methodologies, enforcement and regulation, and environmental reporting could be reviewed to see if there are financial incentives that could be used to generate better behavior.

DFO Meiburg added that a solid proposal could be discussed at EFAB's August meeting.

Public-Private Partnerships

John Boland, Chair, said the workgroup has reached unanimity on the conclusions of the report. There are situations in which public-private partnerships are beneficial and some in which they are not. Private sector participation in the clean water sector has worked for over 200 years. The problem is the barriers in laws, regulations, policies, and perceptions. There are model applications and many successes.

The report entitled *Public-Private Partnerships in the Provision of Water and Wastewater Services: Barriers and Incentives,* March 10-11, 2008, has recommendations that state: "Congress should" take certain actions and others are for implementation by EPA. The problem is that EPA acting alone cannot fix this problem. EPA has to work through the states, with Congress, using commitment and sustained leadership. The Executive Summary is the first draft and may need some editing. *Mr. Boland* asked the Board first to approve of the report as written. The second action would be to decide whether the workgroup should continue on to review the Canadian framework for considering public-private partnerships in a mandatory way. After the review, a letter report could be issued to EPA by next summer.

Questions and Comments

Jim Tozzi thought the report was very understandable, but was concerned about the degree of transparency, whether privately-owned entities should receive SRF loans or grants, and whether that recommendation would close the gap.

Mr. Boland responded that whereas drinking water facilities are eligible for SRF loans and grants, wastewater treatment plants are not eligible, which precludes private ownership of wastewater treatment plants. There may be situations where a design/build/finance alternative would be beneficial, but is ruled out. When the Clean Water Drinking Act was passed, the drinking water industry pressured Congress to allow private entities to receive federal funds. The Workgroup thought the best solution was to remove the prohibition on the wastewater side. This proposal is probably a minor one in terms of closing the gap.

An extensive discussion on the content and strength of the recommendations included the following issues:

- The recommendation on state and federal subsidies might be inconsistent with full-cost pricing and the EFAB Leveraging Report. In one report, EFAB is asking that the state finance people change leveraging from an elective course to a required one. (*Dr. Tozzi*)
- SRF loans to private entities, if allowed, need to include a statement that the private companies are regulated and that the money would be used for infrastructure and not taken as profit. Some states prohibit grants to private entities. (*Ms. Agriss*)
- If the grant is given as a tax-exempt bond, then it is difficult to provide this to a private entity. There is some ability to finance private activity under the Clean Water Act, but there are limitations. Making the Clean Water Act consistent with the Drinking Water Act would not necessarily resolve the issue of funding private activity. (*Dr. Sawyers*)
- There are two ways to make a level playing field between drinking water and wastewater in terms of providing loans or grants to private entities. You can make the subsidies available to the private sector or you can abolish them in the public sector. Some prohibitions in state constitutions are outdated and were never designed to prohibit funds going to private entities delivering a public service. As long as the subsidies exist, there should be a level playing field, because in terms of service there is no difference. (*Mr. Curley)*
- Although there are many restrictions in federal and state regulations that prohibit this, there are some opportunities that are currently available on the Clean Water side to fund private activities. Even thought the State of Maryland has not funded any private projects within the state, they have funded some community systems and would probably finance private projects for wastewater facilities. (*Dr. Sawyers*)
- Leveling the playing field was an argument that the trade association for the private drinking water associations made when the drinking water SRF went into effect. (*Mr. Mafood*)
- There is a long history of providing government subsidies to private organizations. If the private company is the only potential provider, then this is the best way. If you compare private funded to affordable housing, then the people who are against the use of public funds for private companies are on the other side. (*Mr. Downard*)
- Most subsidies are not sustainable and do not contribute to closing the gap. (*Dr. Tozzi*)
- In relation to private utilities, the concept is that these are public service corporations and the subsidy is to the rate payers. (*Mr. Swartz*)
- If public water utilities convert to private water utilities through contracting, the process should avoid unacceptable impacts on customers, especially low-income households. A cross reference could be made to the language in the Affordability Report. (*Mr. Wise*)
- The inclusion of grants to private companies is an appropriate tool. In the Clean Water Act and other grants, it is framed in a hardship context. In reference to the regulated private companies and rate setting by a public service commission, clearly the grant can pass through to the rate payer, because the PSC will set the rates and it won't set it rates to provide a profit for the private company. (*Mr. Gebhardt*)
- Offering grants is not inconsistent with full-cost pricing. If you want full-cost pricing, it has to be modified by the question of affordability. The goal is to address the clean water and public health needs, so grants should be included within the hardship framework. (*Mr. Gebhardt*)

- Under the regulated utility model, the grant or subsidy is controlled by the rate-making process. When American Water Association talks to municipalities where private companies are providing the drinking water service, the cities are wondering why they are still in the clean water business. There is no industry group representing the wastewater side. Regarding the 4 pillars, this issue could be dealt with by placing it in the reference of a tool box. (*Mr. Correll*)

Terry Agriss reiterated that it was not sound public policy to provide grants to private companies. It is really only hardship grants that are provided under the SRF program. From experience in New York, the private companies did not actually have the capability of providing the service on a sustainable basis. If the report leaves grants in, then the language needs to be strengthened based on the fact that these are highly regulated utilities and that there is reasonable assurance that the funds would go to rate payers rather than to increase profits of private companies. Editorial points include beefing up the introduction for the rationale for PPP and emphasizing the idea of sharing risk.

DFO Meiburg commented that this was the kind of debate on a critical issue that should take place on the Board where there is a variety of view points. To frame this, he said that there were three choices: 1) Leave the recommendation as it is; 2); Delete the recommendation or 3) Modify it. Because EFAB operates by consensus, he asked John Boland to get a caucus group together to discuss this further and to report out after lunch.

Further discussion included whether SRF loans were grants; the use of design/build/operate contracts, which are a public-private partnership to reduce the gap; the elimination of all subsidies including SRF funds to level the playing field; and forwarding this discussion to the Administrator. *DFO Meiburg* asked for a showing of hands on the three choices and the preponderance of votes was to leave the recommendation as written. Those who wished to modify the recommendation were asked to meet with *Mr. Boland* in the Wright Room.

Public-Private Partnerships Discussion {*Note: This was reported on after Climate Change.*}

John Boland reported that in the luncheon discussion, it was decided to leave the recommendation as written: To recommend that Congress remove the prohibition for the Clean Water SRF on loans or grants to private entities. To accommodate members concerns, it was decided to insert words to the effect that although this removes the constraint at the federal level; states could continue to have their own policies consistent with their own laws. The federal grants would be for hardship cases. The other recommendation was that “affordability” be cross-referenced with EFAB’s report on Affordability and stated in a footnote. *DFO Meiburg* thought the preponderance of opinion was to approve the recommendations, so with these edits the report would be finished and could be reported out.

Region VII’s Satellite Environmental Finance Center

DFO Meiburg introduced ***John Askew, Regional Administrator, EPA Region VII***, who has been a champion for the EFCs and has pioneered innovative ways to deliver financial services. *Mr. Askew* leads the oversight of federal environmental program throughout Iowa, Kansas, Missouri, Nebraska, and nine tribal nations. He has promoted collaborative partnerships in his region where farming is a particular stakeholder.

John Askew said the Region VII area is the biomass producer of the country. These products, such as soybeans and switch grass, are grown in a sustainable manner—environmentally, ecologically, and economically. The EFC is helpful in providing ideas of how programs could be financed and how to work with states and localities. Because the wireless Internet provides farmers a way to gain access to information, it was decided to use the Internet to reach farmers and Indian nations.

The program was started at an EPA satellite center and was tied into the Administrator's priorities of water infrastructure. The large cities of St. Louis and Kansas City that have infrastructure problems had asked the EPA Regional Office how they could finance programs that were mandated by the States' Department of Natural Resources. He worked with Boise State University and used RGI funds for climate change to start the program. The states' response for the BSU Model has been phenomenal, especially in Kansas. The program is web-based and requires training.

Each state used a different method of initiating and funding the program. *William Jarocki, Regional 10 EFC Director at Boise State University* used the Sustainable Infrastructure Forum to provide information on the BSU model. In Kansas City, they worked with local utility boards. In Northwest Missouri, they met with water planning meeting members. In one state's rural areas, water structure and fiber optic wires were put in the same trenches.

The On-Demand-Training was successful and even reached into Maine in Region I. The program is being introduced to other Regions and to EPA Headquarters. The web-based tools can be used to reach people. EFAB's work in the future could be well represented in the field. DFO Meiburg added that a forum would take place the next day, and 80 people had signed up with EPA.

Questions and Comments

In response to questions and comments, *Mr. Askew or Mr. Jarocki* stated the following:

- EFCs could be placed in land grant universities. The Region and the EFC works with collaborative partners in the universities.
- Funds have been expended by the Region and some states to input data.
- Funding is needed for the EFCs to enable access to expertise from the Internet at remote locations.
- The best approach would be to integrate with state agencies' activities into one cohesive program that could be used with local communities.
- The focus needs to be on how the EFC and the program add value to the states' work, without reinventing the wheel.

- Training-on-Demand has been done with state administrators, senior managers, and local community staff about how the technology and the asset management software work.
- The leveraging model would soon be added to the program.

Jeff Hughes commented on the evolution of the EFC model over the last few years from being seen as part of a regional office to a national EFC Network. Each EFC staff does a lot of work outside the region. Moving forward we could be called national EFCs rather than regional ones. We have to decide between EPA and the EFCs what the model would be in the future. There are advantages to a state-by-state model. Providing services to every state from a regional office is difficult due to budgetary limitations. We could collaborate with state agencies using the Boise State University model.

Climate Change

DFO Meiburg introduced ***Brian McLean, Director , Office of Atmospheric Programs, Office of Air and Radiation, EPA***, whose Office is the focal point for climate change; designs and implements the emissions “cap-and-trade” programs; runs EPA’s voluntary climate protection programs, such as Energy Star; and implements the stratospheric ozone protection plans. *Mr. McLean* led the EPA efforts to develop the Clear Skies legislation to reduce power plan emissions of SO_2, NOx, and mercury.

Brian McLean said the climate issue has been evolving over the last several decades. Progress has been slow, but the next few years EPA should develop a comprehensive response. *Mr. McLean* would discuss some areas of mutual endeavors in the area of climate change and provide an overview of climate change activities, which are very broad and complex and address most segments of our society.

The Climate Change issue emerged in the 1980s. In 1992, the United Nations framework convention on climate change was signed and ratified by the U.S. Some later events were the 1995 Berlin Mandate and the 1997 Kyoto Protocol, which was signed but not ratified by the U.S. Domestically, there has been no comprehensive climate change legislation, but there have been a lot of actions taken at the federal, state, and local levels and in other countries. The recent Energy Legislation would provide some mandates and regulatory actions related to climate.

Up until a year ago, we divided climate change activities into science, technology development, voluntary programs, and international efforts, but in the last year since the Supreme Court Ruling, the Energy bill and the EPA appropriations in December, several mandatory actions were approved. Last year, the Intergovernmental Panel on Climate Change (IPCC) came out with a series of reports on the status of science, implementation, and costs relative to climate change. The science is global, but the U.S. has been the single, largest contributor to scientific effort. The IPCC scientific documents laid the foundation for a scientific discussion of technology development.

One voluntary EPA voluntary program, Energy Star, has been done for years. Two billion Energy Star products have been sold to date. The EPA has reached out to Climate Leaders in 150 corporations who have set goals and targets.

There are some non CO_2 programs, such as Methane from coal mines, landfills, agriculture, natural gas pipelines leaks and other global warming gasses. The captured methane, which is 23 times as potent as CO_2, can be used as a fuel. Methane emissions have been reduced by 11 percent since 1990. Now 23 countries are involved in similar programs, including China, which has the largest coal-derived methane recovery program in the world.

In the past, on the international front, such programs as Methane-to-Markets and the Asia Pacific Partnership were developed by EPA. In the last year, the U.S. is working through the G8 trying to get the 15 or so largest economies in the world, which make of 70-80 percent of the carbon and non-carbon emissions that affect climate, to set up framework that could be used in the other countries.

In the last year, after the Supreme Court decision in April, EPA began working on greenhouse-gas rules and Congress passed an Energy bill, which included a 35 MPH standard for automobiles. One of the other features was low-carbon or renewable fuel standards, which EPA had been charged with developing. The 2005 program was updated, so instead of 7 ½ billion gallons, the U.S. now has to generate 36 billion gallons in a strict time frame. Another program in cooperation with the Office of Water, was the underground injection program, which set a framework for people to be able to do carbon capture and storage from power plants. This would allow the U.S. to continue to use coal, but to reduce the CO_2 emissions.

A third area is to develop a common set of data across the economy with mandatory reporting of greenhouse gases emitted by all major sectors of the U.S. economy. By working with the Office of Air and Radiation, a proposed rule could be completed by September. This information would be in support of legislation to enforce measurement of emissions from facilities and upstream emissions, such as estimating the carbon content of refined gasoline.

Mr. Mclean reported in several other EPA efforts in the area of climate change including:

- Tracking state and local activities in data collection, action plans, legislation and rules to reduce emissions through energy efficiency and other actions. For example, the regional greenhouse gas initiative in the Northeast involves a mandatory cap and trade program for the power sector, and the Western states created the Western Climate Initiative.
- In California, *Mr. McLean* was invited to be on the Market Advisory Committee to help CA develop initiatives on market-based mechanisms to deal with climate.
- In the area of legislative activity, EPA is doing the economic analyses of the legislation, such as the costs to the economy. The modeling is very complex, global in nature, and beyond anything EPA has done in the past. On the House side, Congressman Dingell's committee has written a series of White Papers on climate change. EPA has talked to Congressional staff about various aspects of bills on climate change including international aspects and market oversight.

- In preparation for the new administration, EPA is working on Cap-and-Trade, market mechanisms, a National Plan for Energy Efficiency, adaptation to climate change in the area of building codes, water supply, financing, and auctioning of allowances.

DFO Meiburg described EFAB's role in paying for activities especially in the area of SRFs for water programs. EFAB has expended in the last few years into the transportation sector which is related to climate change. For example, the CO_2 injection program would require financial assurance, if something goes wrong in the clean up. EFAB has been working with the Office of Solid Waste and the Office of Enforcement over financial assurance related to Resource Conservation and Recovery Act (RCRA).

Questions and Comments

Dr. Tozzi asked if EPA has taken a position on the tax credits and subsidies on ethanol and the effect on farmland and citizens of the increase in the production of corn to produce ethanol? *Mr. McLean* said EPA's position would be that of the administration. The hope is to move into cellulostics to reduce environmental and food consequences.

Mr. Wise asked if the states' initiatives would conform to the national program.

Mr. McLean said the states' rain laws were subsumed under the federal law when it was passed, because the federal law was as strong as the state laws. If the federal law is weaker, than the state law would be a problem. Some actions, such as building codes, are appropriate for localities. Individual state and local actions that are appropriate action would remain. In a national cap program, which would interact with other nations, it would be hard to have many different caps.

Mr. Curley said that they had difficulty with the small diesel program because they didn't understand the marketing of emissions. Do you have staff in your office that could help them with how the markets work and how pricing is done?

Mr. McLean responded that EPA has been looking at feasible alternatives to marketing. It is necessary to analyze the costs until the market takes over and gives you the real price, which is usually lower. Technology tends to lower the price over time. In the Knox programs, some states did not get their legislation passed in time for the program to start, so the demand caused the market price to rise dramatically, because the supply for the emission reduction was not available. The pieces of the program have to be put in place by the federal and state governments to avoid problems.

Mr. Curley said they were looking at Special Assessment Districts to help with emissions. Whether this is reducing emissions from lawn mowers or power plants, the overall costs need to be related to the amount of emissions. Where can we get data like that?

Mr. McLean said that there were cost curves or prices for the first ton for each sector. The models are based on a compilation of all of the curves and would allocate the reductions to where the costs are cheapest based on the number of tons. On Friday, 200 pages of data would be available. In some areas, we do not have the data. We have data in the utility and transportation sector, but not lawn mower data. In the future, local air quality source categories that are very specific could include lawn mower emissions.

Other issues brought forward by EFAB members included the following:

- The framework has to be flexible in assuming state activities, because managing and working in a patchwork of regulations is relatively inefficient. (*Patton*)
- A project at Syracuse University, Cornell University, and Hubbard Brook is developing a tool for local governments to facilitate calculations of local scale carbon budgets and the costs for various carbon mitigation options. The tool could serve as the basis for local decision-making and strategies for reducing greenhouse gas emissions and could be of use in future carbon trading and offset programs. (*Lichtenstein*)
- The purchase of goods from other countries without looking at the carbon price would undermine our national efforts. Some kind of offset is needed. (*Gebhardt)*
- To what extent are the federal government, states or European governments doing thorough life cycle of assessment of the various solutions, programs, and systems being proposed for addressing the problem? (*Marsh*)
- In Australia and New Mexico, they are discussing adaptation of infrastructure for water and wastewater facilities due to climate change. Is EPA working on adaptation? (*Himmelberger*)
- The European Economic Union (EEU) trading program has a provision about carbon emissions and trade, which if implemented it would require the EEU to ban imports from the U.S.

In response to these concerns and questions, *Mr. McLean* responded as follows:

- EPA has developed global models, such as the Global Cost of Carbon, in trying to put a price on the benefits or reducing a ton of carbon. Last year, the DOT vehicle bill was struck by the 9^{th} Circuit Court because they had no benefit to the carbon emission reduction from vehicles. EPA is providing DOT with information.
- Trade practices are being discussed, which might require a tariff if the exporting company does not reduce emissions for the same products. It is a very contentious issue with companies and unions to prevent shifts in manufacturing to other countries. Legislation is more responsive to generous financing for companies that are more likely to move than those that are not.
- There is a requirement in the legislation that was passed that EPA do an analysis of the life cycle of the renewable fuels, because depending on the type of fuel, there may be more emissions from the creation of the fuel than the fuel itself. For example, Canada's use of oil sands may emit more carbon than crude oil because of the processing. We do not want to invest in products that will cause more problems.
- Two years ago EPA worked on the underground injection issue and last year the Office of Water was discussing the climate change impact on water supply. Overseas, the Himalayan mountains supplies over 40 percent of the water to the world and much of this will be lost.

The Office of Atmospheric Programs and the Office of Water have given international issues some attention.

- The U.S. is opposed to the EEU provision. {*Note: This needs clarification*}

At this point, DFO Meiburg offered the expertise of the EFAB members to help his office regarding these issues.

EFAB Workgroup Report Outs

Financial Assurance - Cost Estimation

Kelly Downard, Co-Chair began actively serving as project chair as of the January 23, 2008 meeting. At this time, members did not have a lot of trust in the costs estimates and feared that costs would be greatly underestimated. The focus was on how to protect against underestimated or overestimated cost estimates. A level of trust is needed before you can go the assurance level.

On February 22, 2008, a conference call was held to discuss several items after which the summary was sent and was corrected by the group. In the past, the Financial Assurance Workgroup had discussed the positive and negative aspects of various instruments. The success or failure of instruments depended on the situation and the attributes of the instruments themselves. The instruments were bonds, letters of credit, insurance and trusts. If the cost estimate is correct then those items will fail or succeed on their own merits, based on their ability to handle a particular type of assurance. If the cost estimate is wrong then all the items will fail.

The focus was on an analysis of why the product was used and would it be able to accomplish an accurate cost estimate. The critical issue was to recommend a methodology so that people can place trust and confidence in the cost estimate, because everything else depends on a reliable cost estimate.

At the Workgroup discussion yesterday, it was thought that the estimates for closure, post-closure, and the Superfund had more confidence, because the regulations are detailed and there is historical context for most of the situations. The negotiating process helps to keep these estimates more accurate. The most reliability problems were with corrective action, because the written regulations are more limited to accommodate brand new situations where flexibility is needed. Flexibility means there is no framework. Prices may change over time so the cost estimates would be wrong. Continuity and the ability to adjust on a five-year basis are necessary.

There are tools, such as ***CostPro***, a program that allows cost estimators to update the evaluations for closure and post-closure, such as construction costs. Another program, Remediation Action Selection Reports (RASR), is used to deal with uncertainties in corrective action situations. Problems noted were the inconsistent utilization of the tools by different parties which led to less than optimum results. There are legal issues, such as, bankruptcy and fraud, and how they would affect assurance and the number of assurors wanting to provide assurance. For example, in one case when someone defrauded a person providing assurance, the assuror was responsible for the fraud. The goal is to avoid these situations to encourage more assurors.

When you are dealing with post-closure, the price of many items could change due to inflation. The question is how to change the cost estimate to accommodate the price changes over time. Since about 40 states regulate these activities, the Workgroup would be reviewing their regulations. The assurance estimate tools have to be trustworthy and then make it more attractive to the states. The question is: If the corrective method doesn't work, then who is responsible?

The main issue may be a structural change to move the body of knowledge to the people and not people to the knowledge. Experienced and knowledgeable teams regarding the tools could train others. Consistency in the cost estimate process needs to be strong so everyone would end up with the same kinds of numbers. The states need to participate and adopt the tools as their own idea.

Mr. Downard closed by saying that ideas from the meeting would be distributed for comments and re-comments, which would then be followed by a phone conference. The Workgroup is close to their goal, and three or four critical issues need to be solved.

Ms. Deming commented that bankruptcy should not be placed in the category of arbitrary events or legal impediments. If the company has the resources then the cost-estimating is not an issue, because the company is paying for the clean up. It is an issue when the company does not have the resources or there is a bankruptcy, then the cost estimates are examined more closely.

Mr. Downard agreed that if the cost estimate is valid then the next step is to determine whether the operator needs assurance, which relates to credit and financial risk. If they do not need financial assurance and the company defaults, then this is the difficulty. In the banking industry, his bank puts in a clause that says if the borrower's equity goes below a certain level then renegotiation is necessary. If the cost estimates are reviewed more often, then rising prices and bankruptcy might be forewarned. Financial assurance should be requested before it is needed. *Mr. Downard* reiterated that their Workgroup's focus is on cost estimation, not the financial risk, which is related to the operator.

DFO Meiburg summarized the Workgroup session by saying that there was general agreement that cost estimates are critical regardless of the financial instrument involved. With any of the instruments, the first question is: How do you deal with uncertainty? The second question is how to deal with fraud with all of the instruments. The third question is: What should be done with secondary assurance? An issue for EPA is whether there needs to be a more formal process especially where there a lack of guidance existing on corrective action cost estimation. The fourth question is whether there are structural issues for EPA and the states. A more centralized set of foci could be developed rather than a decentralized system, which would require some type of structural recommendation to promote consistency.

DFO Meiburg pointed out the differences between the RCRA and the Super Fund, because historically when EPA derived the cost estimate, then that became the number, whereas in RICRA, which is a state-delegated program, it is more difficult for states to maintain the expertise for corrective action estimates. In terms of next steps, another workgroup session is needed in the fall to continue to frame the questions in this very complex issue. Active participation in the Workgroup is needed to determine what can be done about uncertainty, fraud, secondary assurance, and structural changes.

Financial Assurance – Commercial Insurance

Justin Wilson reported that the Workgroup is working on financial assurance for closure, post-closure and corrective actions situations. At the June 17, 2008 workshop in New York, the workgroup wants to address three aspects:

1. What is insurance? What can it do? What can be expected?
2. When is insurance the applicable tool for financial assurance and when is it not?
3. To address the advantages and disadvantages of standardized policies or terms needed without making insurance commercially unavailable.

The New York workshop will include an overview and panel discussions with a wide variety of viewpoints that would be directed towards the workgroups goal. Names for presenters were requested from the Board. An outline of the discussion issues has been circulated. The Workgroup should have a first draft of their report by the August meeting.

DFO Meiburg said that the group has advanced and is focused on insurance as an instrument. The workshop will focus on an overview of insurance as a financial assurance tool, and then have a group that will discuss the strengths and weaknesses of insurance. States have adopted different policies with regard to insurance as a financial assurance tool. One of the purposes would be to get a group to test specific proposals, one of which is standard policy language.

The challenge is to produce a directed conversation that allows/accommodates all points of views leading to some production conclusions/determinations.

Innovative Financing Tools

Michael Curley, Chair, said the Workgroup is going to review some basic ideas in the Report on Air Pollution in which a principle recommendation was a call for the EPA to encourage States to create Air Quality Finance Authorities. The City of Berkeley is establishing a program to purchase solar systems for electricity for individual houses to reduce greenhouse-gas emissions. They would recover those costs in real estate assessments over 20 years. The Workgroup would like to know how Berkeley is paying for this with tax-exempt bonds, since the proceeds go to private individuals.

John Wise will contact the City of Berkeley and ask them to host a delegate of EFAB members to seek an answer to that question. The answer they come up with will be for the full Board's discussion at the August meeting. Special districts have been used in many states to provide infrastructure development, usually for new developments such as roads, sidewalks, sewers, water, etc., but these have not been used for air. The plan is to investigate the use of special assessments and special tax districts for air pollution reduction.

The costs of gasoline can vary within a state depending on the requirement for additives. Also, the frequency of vehicle emissions varies within a state. If you live in an attainment county, you are not required to get a vehicle emission test every two years. Attainment districts could be co-terminus with the EPA attainment districts. The districts could also cross jurisdictional lines and the funds could be used to pay for many things like truck stop electrifications as in the Port of Baltimore.

Lindene Patton added that her company is looking at issues related to aqua-powered generation. Private companies are offering to install these types of facilities on people's rooftops on a limited lease basis in exchange for the income that is generated off the power generation. *Ms. Patton* was concerned about the use of solar panels, because the technology is likely to be surpassed in a two-five years span. She suggest the use of a program similar to that used with computers to obtain incremental technology improvements through leasing programs, plus subsequent re-use and recycling, when people could not afford the new technology.

Mr. Curley said that the goal is to have a good draft in the hands of Workgroup members and review and revise it to have a draft report for the Board review at the August EFAB meeting.

Public Comments

Dave Miller, USDA Rural Development, reported that the USDA recently awarded a training and technical assistance (TAT) grant for $124,000 to look at the near shore water quality of Lake Ontario. This grant allows Syracuse University and the Lake Ontario Coastal Initiative group review water quality issues that affect their drinking water supply. An application is pending for Phase II of the project that will investigate personal care products and pharmaceuticals.

Mr. Miller reviewed the programs in which USDA-RD and the EFC worked together. For example, EFC's Public Management and Finance Program (PMFP) bring together technical assistance staff for peer networking, leadership capacity development, and asset management. They use BSU's rate setting and management system software. We bring in politicians to educate them on the water problems in New York State.

Last year, Rural Development leveraged 50 percent of their allocations. The USDA-RD has leveraged heavily in making projects affordable including working with the SRF funds with the NY State Environmental Facilities Corporation. If the Farm Bill passes, there is $136 million dollars to address the backlog of water and waste water projects and for energy renewal projects. The bottom line is about adding value, sustainability, and leveraging resources to address the needs in rural America and finding ways to reduce the funding gap.

Robert Montgomery, Exponent, Inc. works at the Inter-American Development Bank (IDB) was involved in financing environmental projects, such as water infrastructure in Latin America. His question was to what extent the Board is using all of this knowledge to work with EPA's International Office. The IDB had discussions with EPA's International Office on promoting technology transfer in the area of water financing. The primary problem is providing potable water outside the United States, which requires subsidies.

Ideas about PPPs, ecosystem services, and adaptation are emerging in Latin America. *Mr. Montgomery's* area was financing of large infrastructure projects and the whole issue of using EMS in project financing. For companies who want to go beyond compliance, how can you give them a financial incentive? For financial assurance, if a problem occurs, we could use different types of tools. This Board could propose to EPA that this information could be used by the International Office of EPA. *DFO Meiburg* responded that in the last few years they have taken their issues from EPA, but EFAB could be interested in international affairs and information transfer.

Meeting Summary, Wrap-Up and Next Steps

DFO Meiburg stated that two themes have emerged; 1) that there is continued EPA interest and support for the Board and 2) support for positive collaboration with NACEPT. Three reports on the verge of being approved: The Leveraging Report, the Public-Private Partnerships Report, and the Environmental Management Systems Report. The robust debate over the Leveraging and the PPP reports and the strong language in the recommendations will be of help to EPA.

This meeting focused on the EFCs because of Jeff Hughes and John Askew's reports. We will have to work on National EFCs because the Network has become stronger. We are seeing continual progress on Financial Assurance in the two reports. Two themes emerged that would require more work by EFAB: climate change and sustainable finance of green infrastructure. On the Innovative Finance side, the workgroup has given us ideas about using concepts developed elsewhere and seeing how they could be used in other areas.

Chair Jim Barnes added that this was a very productive meeting in terms of the energetic exchanges in the workgroups and Board sessions, and the ideas and challenges for the Board in the future. *DFO Meiburg* said they would be receiving the final versions of the reports on Leveraging, Environmental Management and Finance reports. In San Francisco, we will be laying down plans for the next year.

The meeting was adjourned at **4:50 p.m.**