United States Environmental Protection Agency

Office of the Chief Financial Officer

Center for Environmental Finance

Meeting Summary of the Environmental Financial Advisory Board

March 16 - 17, 2010

Omni Shoreham Hotel

Washington, DC

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The minutes that follow reflect a summary of what was conveyed during the course of the meeting. The Board is not responsible for any potential inaccuracies that may appear in these minutes as a result of information conveyed. Moreover, the Board advises that additional information sources be consulted in cases where any concern may exist about statistics or any other information contained within these minutes.

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Environmental Financial Advisory Board (EFAB)
Meeting Summary

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Environmental Financial Advisory Board (EFAB)
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Tuesday, March 16, 2010

EFAB Board Meeting (1:30 p.m.)

Opening Remarks and Meeting Overview

Stan Meiburg, EFAB Designated Federal Official (DFO) called the meeting to order at 1:42 p.m. He commented on the number of outgoing and incoming members and had the members introduce themselves. *Chairman James Barnes* commented that the meeting, his last one, would include several new senior EPA officials and that the incoming members have already been active in the workgroups. *DFO Meiburg* said Member Bradley Abelow will be the next chairman of EFAB. Members George Butcher, Don Correll, Greg Swartz, Steve Thompson, Andrew Sawyers, Lindene Patton, Eric Draper, and Doug Scott were not present. *Member Terry Agriss* introduced and recognized Patricia Jones, who has been working on research for the Water Loss Reduction Workgroup.

EPA Priorities

DFO Meiburg introduced Maryann Froehlich, Deputy Chief Financial Officer of the EPA. Ms. Froehlich is a long-term employee of EPA and has served in many capacities throughout the Agency. *Ms. Froehlich* thanked the members for their work and insight. She noted that help is needed at the federal, state, and local levels to address the question of how to pay for the implementation of environmental regulation. Particularly helpful is how EFAB has aligned its work with EPA's priorities and worked with national program managers, such as the assistant administrators scheduled to speak that day. Administrator Jackson has put together a blueprint for the next few years of EPA's work. That blueprint includes seven priorities: taking action on climate change, improving air quality, ensuring the safety of chemicals, cleaning up communities, protecting America's waters, expanding the conversation on environmentalism and working for environmental justice, and establishing strong state and tribal partnerships. EPA will be meeting with the states to determine how the agency can assist them in maintaining their environmental work in the present economy. As the nation's need and expectations for environmental protection grows, EFAB's advice continues to grow in importance.

Recognition of Outgoing Members

DFO Meiburg said Deputy Administrator Robert Perciasepe would be joining the Board members for dinner. He expressed his appreciation for the members, who serve the public with spirit and engagement. He gave plaques to outgoing members: Terry Agriss;

George Butcher, who was not present; Michael Curley; Kelly Downard; Langston Marsh; James Tozzi; and Chair Barnes, recognizing each member's contributions individually. *Deputy Chief Financial Officer Froehlich* recognized Mr. Meiberg's work as DFO since 2001 and continued high-level service in the EPA. Mr. Meiburg had asked to be relieved from DFO duties to devote more time to working as acting regional administrator for Region 4. He said policy engagement and the speed of change in the EPA is greater than he has seen in his 32 years with the Agency. His successor has not yet been named, but DFO Meiburg is working to achieve a smooth transition. He commented on the Board's diversity of points of view combined with great regard for each other and said the new members will have the same spirit of energy and public service for greenhouse gases.

EPA Air Priorities and Themes

DFO Meiburg introduced Assistant Administrator Gina McCarthy of the Office of Air and Radiation. She has been working in the field of environmental protection for 25 years and has extensive experience with the Regional Greenhouse Gas Initiative, the first market-based cap and trade system.

Assistant Administrator McCarthy thanked the Board for its support to her office. She said EPA wants to match up environmental needs with smart ways of investing money to meet those needs in order to grow the economy and preserve the quality of life. Moving forward, the rules should be more than rhetoric, and she sought the Board's help in providing a financial understanding. OAR's efforts are closely aligned with the Administrator's priorities. One of those priorities is climate change, which is the broadest of Assistant Administrator McCarthy's priorities and the most amenable to smart economic investment. Greenhouse gas (GHG) emissions represent inefficiency, and failures in efficiency are opportunities to save money.

The Administrator is looking forward to a legislative answer to climate change. Currently, EPA is meeting its legal requirements to address greenhouse gases. On December 7, the Administrator issued a finding that greenhouse gases endanger public health and welfare and that mobile sources, which contribute about 30 percent of greenhouse gas emissions, contribute significantly to the endangerment. That led to the Light Duty Vehicle Rule. The joint rule by DOT's NHTSA is setting a CAFE standard, and EPA is establishing greenhouse gas standards for vehicles. The standards address tailpipe GHG emissions as well as other things, like auto air conditioners, that can emit GHGs. The rule will be finalized and issued in March.

The Clean Air Act requires that, once a pollutant is regulated, there must be a permit process for certain stationary sources of the pollutant. OAR is identifying through rulemaking, when greenhouse gasses will become regulated and how to phase in the regulations to address the largest facilities first. The permittee is required to go through a BACT (Best Available Control Technology) process to look at what other facilities have achieved through technology or operating procedures to become as clean as possible. For greenhouse gases, she said, this will spur the private sector to look at energy efficiency and technology improvements to move toward reducing emissions and making the system more efficient. It will also raise questions of when carbon capture and sequestration will become a viable and cost-effective technology. OAR will have to issue BACT guidance by the end of the year. The regulation will spark large investments in energy efficiency, and there are opportunities for efficiency funding at the state levels, including stimulus funds. One challenge is to think of how to talk about the regulatory requirements in a way that attracts investment. The 2011 budget proposes to increase funding to states, regions, and EPA to prepare for GHG permitting.

OAR is on an aggressive schedule to follow the Clean Air Act and to review the standards for public health and welfare related to the criteria pollutants: lead, CO, PM, ozone, SO_2, and NO_2. In the past, EPA has not met the requirement to accomplish this review every five years. States will soon be required to develop implementation plans to make improvements in air quality to meet new standards. EPA is looking into doing the reviews and implementation plans with a more interactive, multi-pollutant strategy. The same thing is being done to update emissions requirements for industrial sectors which allows for better business planning. Especially in the utility sector, providing a long-term roadmap is a way to increase certainty, which is better for investment. OAR is working toward multi-pollutant monitoring, which would be a better way to look at burdened communities and cumulative impact. For the NO_2/NAAOS, a new monitoring system will allow multi-pollutant planning with the regions and states. OAR wants to meet the letter of the law and do what science demands, but in a way that leads to smart investments to build a clean energy future.

Of special interest is financing strategies. Pollution represents inefficiencies, and the pollutant can be an opportunity to invest in increased efficiencies and to build the economy. Generally, the more efficient you are, the less you pollute. OAR is looking at how to use energy cost savings to fund efficiency investment opportunities on a large scale. For example, OAR has worked with investment firms that support investments in energy efficiency where the energy savings pay back the investment in a few years. The model has been implemented and works. Regulation drives investment, and having tools for that investment can aid companies in their decision making. She asked the Board to think about how to get to the inefficiencies and create these investment opportunities, perhaps by pooling such needs into an investment portfolio to make the capital available.

She also challenged the Board regarding the mandatory reporting rule, a requirement that larger facilities report their greenhouse emissions annually, starting next year. The information will be made public. This will cause companies to be aware of their own inefficiencies and provide incentives to become more efficient. She would like to work with the states on where they are investing energy dollars to develop programs to service these newly-discovered needs.

Discussion

Member Curley said the state air quality finance authority can aggregate small credits and bring them to market as municipal bonds, taxed or untaxed, and corporations will want to take advantage of long term credit. If the payback is for 30 years, the savings start immediately. For small businesses, waiting three years for payback is too long. Companies will be interested in the size of immediate savings in energy bills compared to the size of the payment. *Assistant Administrator McCarthy* said it is important to articulate that strategy. She asked about private, rather than public investment on this strategy, since there is interest from private firms. *Member Curley* said the taxable bonds would be private, fixed-income dollars. *Member Francoeur* said HUD is working with public housing authorities on energy-saving improvements. The investments are paid for out of the normal HUD subsidies, out of the energy savings. Most programs are public sector improvements by municipal and state agencies. The Clinton Foundation is looking at the issue from a commercial context, such as for large commercial property owners. Many of these owners already have a great deal of debt, so it is important to look at lender priorities. On the bonds programs, there is the issue of commodity risk. The savings is linked to the cost of fuel and power generation.

Member Hernandez suggested that EPA play a role in publicizing the state and local programs and partner with DOE, which has funds to stimulate the green economy. She raised the example of the Empire State Building and other high rise retrofits, which have received very little attention. However, debt priority and debt load issues are important. Private money will not come until the government shows this can work. It works by tying the improvement costs to the structures and properties rather than to the borrowers. Private capital should be included when calculating matching funds from the federal government. As the economy stabilizes, there will be more private investment, providing more options to fund the regulatory agenda.

Mr. Jarocki said there had been discussions on environmental SRFs, which jumpstarted investment. He suggested looking for hot spots, rather than statewide SRFs. These SRFs could be used in the manner of block grants to leverage SRF and local investment to loan out for reinvestment. There will have to be successful examples to encourage the private sector. *Member Francoeur* said she would not discount starting at the public sector level, considering how much real estate is government-owned and the opportunity to use those projects as examples. *Assistant Administrator McCarthy* said those examples exist. Her interest is in knowing what will make people jump at the opportunity. For example, EPA is required by the courts to issue requirements on boilers. Replacing these boilers will be expensive, and there should be a way to support the change EPA is trying to generate, rather than forcing the change at a financially bad time. It is a matter of EPA articulating its challenges differently, looking at opportunities as well as requirements. EPA needs creative funding solutions, since money is tight at all levels.

Member Abelow said it is important to think about what is being financed. If a boiler manufacturer can think of leasing rather than selling boilers, the decision at the plant level is not about a large capital investment. Assistant Administrator McCarthy said this was a valuable idea. *Member Francoeur* said some the question is what guarantee the energy savings provider puts in to make them an equity partner so the repayment becomes a function of actual savings.

Member Dixon Peay said marrying the rules with investment returns is important for changing the view of regulation and getting to the heart of the problem. It is important to emphasize this becoming a catalyst for cooperation at all levels to leverage funds and efforts. She added that this is a very timely issue, and there may be pockets of SRF that can be used in a phased approach.

Member Trabucchi thanked McCarthy for the clear charge. She said there is a public outreach and communication problem. For example, SEC recently came out with climate disclosure guidance, which looks at financial risks. EPA should marry the financial and environmental risks in terms of return on investment from a balance sheet perspective. EPA can articulate a structure of replacing boilers in a particular industry, zone, or region in exchange for an offset of carbon credits or mandatory reporting requirements. She pointed out that the Treasury is an important part of this, since they are looking at tax credits, municipal tax bonds, and tax incentives. EPA should be part of that process to make sure tax credits foster environmental returns.

Ms. Diefendorf said there is a learning curve for efficiencies, and companies may see the benefits but not have the time to implement them. She said the labor can be provided externally, such as by providing the energy assessments for businesses and guiding them through making improvements. *DFO Meiburg* thanked McCarthy for the clear challenges and said those challenges will be on the Board's agenda.

EPA Water Priorities and Themes

DFO Meiburg introduced Assistant Administrator Peter Silva of the Office of Water, who has worked on water issues in California and on the Border Environmental Cooperation. He currently is working on the water SRFs. *Assistant Administrator Silva* said the Administrator has laid out her priorities, focusing on what EPA does for the communities and the best ways to affect people's lives on the ground and how to look at job creation, environment and quality of life. He has two main focus areas: sustainable communities and healthy watersheds. Water is a key factor in economic vitality in any community, both water quality and water quantity. Water quality and quantity issues impact everything industries do at a local level.

On the sustainability side, the Economic Recovery Act devoted 4 billion to wastewater and $2 billion to drinking water; it was all under contract by the deadline. Of that, 20 percent was required to go to green infrastructure investment. That sort of investment will continue, and EPA is looking at creating a better definition of green infrastructure and how to roll it into SRF requirements. He asked for Board assistance on that.

The WaterSense program is a water conservation program for residents. He would like to see a WaterSense or EnergyStar-like program for water utilities, perhaps through SRFs or incentives. The Urban Waters Program works with disadvantaged communities near bodies of water that cannot access the water. This is part of the Sustainable Communities Initiative in cooperation with DOT and HUD. EPA is working with communities that cannot afford loans. The states can have low interest, negative interest loans, and loan forgiveness. These are included in a draft talking paper to congress. He asked if this is something the SRFs should have moving forward and whether the set-aside for small communities should be made mandatory. Congress looks at sustainability as the ability to get off of SRFs, and that is something to look at for the next budget year.

Regarding healthy watersheds, EPA has $250 million for the Chesapeake Bay efforts. There is $475 million for the Great Lakes program. There is congressional interest in the approach of EPA coordinating the federal side and working with the states to address these long-term problems.

The Office of Water wants to work with utilities on energy and water conservation, looking at financial, economic, and regulatory impediments to water reuse, reclamation, and recharge. The districting system has become inefficient, and Assistant Administrator Silva would like to see creative thinking on addressing water and energy needs.

The Office of Water is trying to regulate with a water-based approach on how to work with the states on point source and non point source. He is looking at trading and other market-based approaches. He expressed interest in water loss reduction and SRF reinvestment options.

Discussion

DFO Meiburg said the Water Loss Reduction Workgroup has a draft report the Board will be looking at. There will be a report on SRF investment options, which grew out of a 2008 EFAB report that demonstrated that SRFs that leverage their funds were more successful. The Board also works on energy efficiency in wastewater treatment and affordability. Affordability should be considered in relation to households, since there are efficiencies to be gained at that level. EFAB has looked at non-point source financing, including the trading issues. EFAB has demonstrated interest in the issues Assistant Administrator Silva raised.

Member Deming said EFAB's earlier recommendation on combining water and wastewater districts to gain efficiencies was controversial. *DFO Meiburg* said the Clean Water Act and the Safe Drinking Water Acts do not have the same fund eligibility requirements. Though there were potential advantages of scale, the proponents of the two funds were concerned about losing flexibility. *Member Agriss* said the Water Loss Reduction Workgroup has discussed the issue of combining various units.

Member Marsh said the Innovative Finance Workgroup has been thinking about sustainable communities and healthy watersheds. In a report on Sustainable Watershed Finance, EFAB worked with OWOW and presented innovative concepts. On the Sustainable Communities Partnership, he talked about the real opportunities for working with the Office of Water on how applicable some innovative finance techniques might be to the projects under the partnership.

Member Hernandez said there are efficiencies to be achieved through a collective and collaborative approach to water. She warned that stormwater programs are migrating toward onsite containment, percolation, and reuse. There are supply issues related to that. It is important to look at the broad spectrum to prevent efforts from running into each other. Assistant Administrator Silva said stormwater collection is a water rights issue in some areas, and that should be considered.

Member Johnson said many small towns and cities cannot afford to improve water quality. Area-wide planning can create larger systems that can be financed and maintained more sustainably. State-level politics is also an issue, sometimes involving state administrations ignoring cities and towns with a different political affiliation. There is also the issue of septic tanks and public health, especially in the rural South. In some areas, water loss is actually a matter of water theft. The area-wide approach is something to be considered for these problems.

Ms. Himmelberger said it may be time to look at lessons learned from ARRA versus normal SRF funding. Many states got much more done this year than they normally do, largely due to improved cooperation, give and take with EPA offices, and an increased number of applications. These things can be applied in the future to streamline processes and continue the momentum. Assistant Administrator Silva said the states have learned a great deal about improving their processes; he would like to see a retrospective on. *Member Wilson* commented that the ARRA funding was use or lose, and EPA kept the states informed of their deadlines. That created a sense of urgency for the states. *Member Mason* said the ARRA retrospective should allow states to be honest on how to improve things outside of ARRA.

Member Livesay raised the issue of tribes as disadvantaged communities that rely on grants and need help with infrastructure. *Assistant Administrator Silva* said there are set-asides for tribes, but The Office of Water can look at how money gets to the tribes.

Member Massey said states may be losing flexibility in the SRF, and some federal priorities are being pushed on the states. *Assistant Administrator Silva* said some federal priorities are being emphasized, and Congress may add more requirements. He asked the Board whether that is good or bad and how to manage it. *Member Massey* said the states will stop participating if the requirements grow too specific.

Member Dixon Peay said ARRA worked because it used the proven SRF program. Future initiatives on trading have been discussed by the Board. Assistant Administrator Silva said EPA has a history of working closely with the states. He thanked the Board for their input.

Workgroup Report Out: Carbon Capture and Sequestration

Member Rachel Deming reported from the workgroup, which has completed a draft report, which was distributed to the Board. That report will be revised overnight. The report was in response to a charge from those in the Agency working on the Safe

Drinking Water Act to assist on making recommendations for financial assurance for carbon sequestration, particularly for geological sequestration. The Agency is waiting for EFAB's advice before issuing the proposed rule, so issuance is urgent.

There were two key tasks charged by the Agency. First was to comment on the Safe Drinking Water Act regulations and financial assurance for the operational and plugging phases, which was the subject of the report. The second was long-term stewardship, which was not in this paper and will be a component of subsequent workgroup work. This is consistent with discussion at the August meeting. This report is aimed at assisting the Agency with financial assurance in proposing the Class 6 rulemaking under SDWA.

In reviewing the SDWA rules, the Workgroup tried to build on the knowledge gained from looking at the RCRA rules on financial assurance and to build on the work the Board has done previously on RCRA financial assurance instruments: the financial test, captive insurance, and commercial insurance instruments. Carbon sequestration is difficult to analyze because many people do not see it as hazardous. The main issue is intrusion of brackish water into groundwater drinking systems. This is a greater hazard than mobilization of hazardous constituents into groundwater. The recommendations should make clear that the Board understands the distinction.

Another major concern across financial assurance has been whether the current economic conditions change prior advice. The Workgroup concluded that one does not regulate for a specific time. The Workgroup wishes to include more on available cash flows in times of economic stress. That component will be stated in the paper. The Workgroup will include a recommendation of financial assurance for the components of an operational system for carbon sequestration that go to the pieces of the system that monitor groundwater. The operational system will include monitoring wells and continued operation of the wells, which can be expensive. It is important to know up front what the financial assurance is being provided for.

The combined system, with an up-front financial assurance component for monitoring wells and plugging, is similar to the RCRA system for closure. The recommendation will include regular rolling reviews to assess the operation of the system and to provide financial assurances for any second risk that might arise at that time. Under SDWA, there are Class 1 and Class 2 wells. The new class of wells in the recommendation are Class 6 wells. Class 2 wells are used for enhanced oil recovery. Class 1 wells are waste disposal underground injection wells. The RCRA requirements are more similar to Class 1 than Class 2 wells. Class 2 wells are looked at on a well-specific basis, while RCRA financial assurance looks at a whole facility. A carbon sequestration operation would require multiple injection and monitoring wells, and financial assurance should address the entire operation. For that reason, financial assurance should be treated in a manner more similar to the Class 1 financial assurance and RCRA regulations. Additionally, the Workgroup outlined some differences between Class 1 and RCRA financial assurance, especially reports under bankruptcy and other reporting requirements already in the draft report.

The amount of financial assurance should be based on the SDWA risk at issue as a floor, and the amount should be tied to maintaining and operating a monetary network to verify that adverse impacts to drinking water do not occur and to assure well closure. If adverse impacts occur or are threatened to occur, corrective action would be triggered, and a further floor amount for financial assurance would be evaluated.

Because RCRA Class 1 financial mechanisms are based on a hazardous waste facility owner and operator considerations, there may be differences in the owner/operator profiles for proposed carbon sequestration facilities, requiring additional financial assurance mechanisms. Part of the RCRA basis is economic, excluding people who cannot afford long-term operation.

Member Hernandez added that there were many undercapitalized facilities at the beginning of the RCRA program. The sequestration owner/operator profile is still evolving, so the Workgroup did not want to import the RCRA corrective action requirements but to provide for flexibility for utilities, including rate-based mechanisms and for the Agency to have a catch-all seventh mechanism to provide the functional equivalent of financial assurance under the existing regulatory mechanisms. *Member Deming* said that, since pilot projects and development are ongoing, performance levels cannot yet be accurately predicted at this point, supporting the need for revisiting. *Ms. Hernandez* added that the uncertainty should be addressed as part of the permitting process and the regular review of permitted facility processes. Financial assurance mechanisms should not be so costly that they create barriers to the development and deployment of effective carbon sequestration technologies.

Member Deming said EFAB's recommended use of financial assurance mechanisms relates only to its familiarity with and belief in the effectiveness of the mechanisms. The recommendation does not make any judgment that sequestration facilities are or should be treated as hazardous waste treatment or disposal. EFAB's recommendations apply to the use of the financial tool, not characterization of the risk.

Discussion

DFO Meiburg noted that the Workgroup meeting was exceptionally productive. Comments should go back to the Workgroup so the report can be issued at the end of the month. *Member Trabucci* said the Workgroup members would like to see the draft language included and for the revised draft to go to the Board. *DFO Meiburg* said the vote will probably occur by email. *Member Deming* said EPA staff at the meeting felt the Workgroup's charge was met.

Adjournment

The day's agenda completed, DFO Meiburg adjourned the meeting at 4:52 p.m.

Wednesday March 17, 2010 (9:00 a.m.)

Opening Remarks

DFO Meiburg called the meeting to order at 9:08 a.m. He noted that Deputy Administrator Bob Perciasepe had met with the Board members on the previous evening and expressed a desire to work closely with the Board in the future. Member Doug Scott, who was not present on the first day, was present on the second. DFO Meiburg moved on to the EFCN report, which was started while waiting for CFO Bennett to arrive and was completed after CFO Bennett's presentation. EPA supports ten environmental finance centers. These centers work closely with the Board and collaborate among themselves.

Environmental Finance Center Network Update

Joanne Throwe, President of the EFCN, said the Centers have, for the first time, had to compete to remain existing centers, and they succeeded. All of the EFCs succeeded I retaining their status with the addition of two new centers. One new center will be managed by Heather Himmelburger and the other will be located at Wichita State University. Joanne introduced Angela Buzard from Wichita State University. Wichita State is also home to the Kansas Public Finance Center, which provides support to local and state governments and will prove a valuable partner. They also have the Regional Economic Area Partnership, a coalition of 37 local governments that meet to discuss issues such as water supply and quality. The EFC is located inside the Hugo Wall School of Urban and Public Affairs. The school has a history of academic research from a community perspective and provides professional development for many associations statewide. The workplan is being defined, and the Center is soliciting input to provide the most important services. However, the agenda will include items the Center has experience with: water systems, land use planning, energy conservation initiatives, and air pollution. They plan to provide services for communication, research, technical assistance, and professional development.

Sam Merrill, of the Portland, Maine, EFC, spoke about smart growth and climate change. His EFC developed and implemented a training and workshop series for those planning communities to help make smart growth happen. This is focused on the mechanics of social change (leverage, influence, and political power) rather than technical aspects. These trainings have occurred in a number of states and are popular. On a higher level, He has been researching and drafting legislation in Maine on quality of place. The bill sets up a series of economic development districts to help push quality of place issues at the local level. This model is being exported to other states. Secretaries Salazar (DOI) and Vilsack (USDA) have met with him on implementation of the Sustainable Communities initiative, looking for local case study implementation opportunities.

Mr. Merrill's EFC has done analysis on how states should allocate revenues from RGGI auctions. At the local level, they are helping communities work on their adaptation plans, which are usually lacking in specifics. The Centers has developed software tools to help communities do financial planning in various areas. One is being developed for coastal adaptation to sea level rise (COAST). It is being tested in Connecticut and has community and military involvement. The tool provides GIS overlay analysis looking at storm surge and sea level rise models to determine what real estate or assets are at risk. This aids in visualizing possible actions and in decision-making. There are many hundreds of communities that can benefit from this model, including inland towns with vulnerabilities other than sea levels and storms.

Due to the arrival of CFO Bennett, the presentation was paused for the CFO's presentation.

EPA FY 2011 Budget Priorities

Barbara J. Bennett, Chief Financial Officer, said her background is in the private sector, so she appreciates innovative finance techniques and the Board's work. As the markets approach a tipping point with respect to green technology, she is looking to the Board for more creative ideas on how to spark markets.

CFO Bennett gave an overview of the Administrator's priorities in relationship to the President's proposed 2011 budget for EPA, which will have a 3 percent reduction. Some of those reductions will be in SRFs and in the Great Lakes restoration, which is not yet in full swing. The emphasis of the budget is to address state budgetary concerns.

The Administrator's priorities for 2011 budget are: taking action on climate change; improving air quality; protecting waters; cleaning up communities; expanding the conversation on environmentalism and environmental justice; and resetting, rebuilding, and strengthening State/Federal partnerships. There will be an additional $43 million for efforts on climate change toward clean energy future. The Greenhouse Gas Reporting Rule provides technical assistance to assure that permitting under the Clean Air Act will be manageable; this includes standards for mobile sources and regulatory work for large stationary sources. There is $60 million in the budget for state efforts to implement the updated national ambient air quality standards. For protecting America's waters, there is $63 million, including an additional $13 million dollars to help restore the Chesapeake Bay and $17 million in new funds for the Mississippi River Basin. For cleaning up communities, there is $1.3 billion to address Superfund sites. Cleaning the sites improves communities' health and allows the properties to be used for economic development. The budget includes $215 million to clean up abandoned brownfields. CFO Bennett hopes this funding will support planning to leverage dollars to spur economic development. For expanding the conversation on environmentalism, there are funds to target brownfield investments to underserved and disadvantaged neighborhoods. These communities often do not have the resources to advocate for themselves and often receive disproportionate impacts. It is important to teach these communities how to advocate for themselves and for EPA to be aware of these communities. There is $56 million for chemical assessment and risk reviews to reduce unreasonable risks for new or existing chemicals. There is $29 million (including $15 million in grant funding) to continue the elimination of childhood lead poisoning. There is $6 million to support national efforts to mitigate exposure to high-risk legacy chemicals, like mercury and asbestos. Overall, the budget closely reflects the Administrator's priorities.

EPA is in the process of updating the five-year strategic plan for the agency, and each of these priorities is part of that five-year plan, so as to focus the Agency's efforts in the direction the Administrator and President want to go. CFO Bennett asked the Board to consider its projects in the context of these priorities. Under all of these priorities are the Agency values of high quality research, the rule of law, and the use of valid science. Innovation and new technology will be a part of the framework of everything going forward.

Discussion

Member Agriss asked if EFAB could be better funded, considering the quality of work and the amount of benefit that comes from a small investment in researchers. *CFO Bennett* said she understood the issue and would look into it. *Ms. Pesek*, Director of the EFC for Region 2, asked about the RFPs for the Sustainable Communities Partnership. *CFO Bennett* said it is a three-way partnership with DOT and HUD, and EPA will be offering similar grants. *DFO Meiburg* said EPA has been trying to bring in CDC as well. The Sustainable Communities Partnership is an opportunity for EPA to leverage efforts with other agencies. *Member Rice* asked about the five-year plan, particularly about leveraging EPA's assets in the current economy. *CFO Bennett* said the first thing is to direct resources toward the Administrator's priorities. She anticipated a flat or lower budget going forward and is interested in restoring partnerships that have lost funding. *Member Livesay* asked about the five year plan as pertains to tribal governments. CFO Bennett said an increase in grants for the next year was proposed but could not speak to future budgets.

Ms. Himmelberger from the New Mexico EFC noted that the 2011 budget was decreased from the previous year and asked if that was a general cut or reflected specific decreases. CFO Bennett said it reflected specific decreases: reductions in SRFs and the Great Lakes Restoration Initiative cut. The Great Lakes received a large increase in the 2010 budget, but the program needs more time to develop before it is prudent to maintain that increase. The SRFs are loans, and EPA is looking to move toward grants.

Member Scott asked about money going to the states for the financial side of environmental justice. *DFO Meiburg* said there is money in the budget for environmental justice. Regarding climate change, there is a $43 million increase for climate change, $25 million of which is state grants around the permitting rule. Regarding the reporting rule, there is $21 million for the registry. To prepare the states for the regulations and implementation, EPA is required to regulate for other sources, and there is funding. Money is in the budget to prepare the states, and the Administrator has said the Tailoring Rule will adjust things.

Member Marsh said many Board recommendations have not been fully implemented. He issued a challenge to look at past reports and see how they mesh with the current

Administrator's strategic plan. He noted that there was a request for boiler strategies, which the Board had already issued recommendations for recently. *DFO Meiburg* said there was a review of the reports; the reports had not been ignored and some were implemented. He noted the long term SRF loans that were not funded by capitalization grants, changed regulations on financial assurance instruments, and the loan guarantee project. There was a report involving a shift in the way people think about affordability as related to wastewater and drainwater projects, moving toward full-cost pricing. The Board completed a report in Aug 2008 on leveraging, showing the benefit of leveraging to make SRF. *CFO Bennett* asked for the inventory of reports. *Ms. Bowie* said the staff is now working to complete an inventory that goes back ten years and should be issued within the next couple of months.

Member Downard said funding and using the EFCs is a way to expand Agency influence and activity while controlling costs. *Member Hughes* recommended looking at EFAB's affordability report in relation to the subsidies in the 2010 budget for the SRF program, since the preliminary guidance does not indicate that the report has been consulted. *CFO Bennett* thanked the Board for its work.

Environmental Finance Center Network Update (Continued)

President Throwe introduced *Lauren Heberle*, who spoke on cleaning up communities. The University of Louisville's practice guides and policy reports emphasize finding economic solutions to environmental problems by intentionally addressing environmental, economic, and social concerns simultaneously. These address climate change, sustainable land use, urban agriculture and gardens, environmental justice, greening institutions in policy and practice, green infrastructure development, and air quality.

In response to a symposium on safe urban agriculture on brownfields and other vacant properties, the Center is developing resources for municipalities, community-based organizations, and nonprofits who want to support urban gardens and agriculture, safe soil standards, regional food system plans, and urban schoolyard gardens and environmental classrooms. Food system plans and urban agriculture strengthen a neighborhood's access to stable and healthy food. Urban agriculture and gardens strengthen access to sustainable and healthy food, helping in financially difficult times and improving environmental conditions. The most recent practice guide on safe urban agriculture has been very popular. Communities are interested in urban agriculture and community gardens to improve public health, solve local food deserts, improve food safety and security, address vacant property issues, and provide economic development opportunities. The latest guide is a primer for urban gardening, and it addresses safe soil practices: dangers of gardening on contaminated soul, potential sources of contamination, acceptable levels of contamination, and how to test for contamination. The Center is working with the state of Kentucky to figure out funding mechanisms for site assessments and testing. It is working with Region 5 on an urban agriculture summit that will develop recommendations on urban agriculture and community gardens. That summit will be replicated in Region 4. She encouraged EPA and USDA to work together

on this by visiting the regional offices. She has partnered with the University of Louisville City Solutions Center to produce school-specific community-based schoolyard environmental design guides, which incorporate input from staff, students, parents, and community members. This is also an opportunity to revitalize the area.
She distributed Kentucky Wet Growth Tools for Sustainable Development, a handbook on land use and water, developed in collaboration with the Center for Land Use and Environmental Responsibility. The book looks at land use and its impact on water quality, supply, and health of watersheds. The co-author has asked the Center to help him update his American Planning Association guide on environmental justice.

President Throwe introduced *Kevin O'Brien* of the Great Lakes Environmental Finance Center. The Center has been working with NOAA to identify the training needs for local government officials across the Lake Erie Basin, to help develop strategic plans, to work with the estuaries, and to hold focus groups across the basin to find out what local officials need to know about coastal resource management issues. They are now looking at how to deliver with the network of partners: Sea Grant program, Ohio Department of Natural Resources, and the Ohio EPA. They developed a regional training consortium across the Lake Erie Basin, pulling together the two Ohio EPA districts, soil and water conservation officers for each county, federal soil and water staff, and nonprofits. The focus is to provide a consistent curriculum for meaningful training and trying to maximize the number of courses that can be taught regularly at a consistent cost. Training activities have increased, both in the field and in the classroom. This has fostered more thoughtful problem-solving across organizations, looking proactively at future needs and how to address them.

President Throwe introduced *Sara Jade Pesek*, who spoke on expanding the conversation on environmentalism and working for environmental justice. Her center is co-located with the Syracuse Center of Excellence in a new LEED Platinum building. The building itself is a learning tool and can be used to demonstrate various green technologies. The Center has been offering continuing education on sustainable practices to zoning and planning officials. There are now two offices, one at Syracuse university and one in New York City. The NYC office is collocated with a green architecture firm in a LEED Platinum interior space. The Center is actively involved with the Sustainable Communities Partnership Initiative. A pilot program was announced in February for technical assistance to states regarding revising the clean water SRF. The EFC at Syracuse was chosen as the technical assistance providers to New York. The Center is looking at how to incorporate asset management and green infrastructure into the SRF while maintaining a focus on water quality. The EFC is using a multi-layered, multi-stakeholder approach. Recommendations go out in the next three months for stakeholder feedback. The EFC is also doing a review of the green innovation grant program, which is part of ARRA funding.

The EFC has been working with Region 2 and headquarters to get communities to band together to make applications for DOT and HUD funds. They met at the EFC in Syracuse for workshops on the SFR provision and Sustainable Communities Partnership.

The Green Project Exchange is a new project to create a forum for local leaders to share sustainability stories, describing projects, funding, and publicity. The forum will be searchable by many criteria, including project type and community size. The site will be launched in the next two months.

President Throwe then called for quick updates from the other EFCs. *Jeff Hughes* from the North Carolina EFC said much of the ARRA money went to local governments for energy projects, and the EFC is on a team to provide national technical assistance to those communities working with that $3 billion. It is a good way to tie EFAB, EPA, and DOE work together. *DFO Meiburg* commented that the EFC has set up workshops in the Mississippi Delta area, working with financing of drinking water and waste water projects. *Sarah Diefendorf* of the California EFC highlighted the Tribal Sustainable Enterprise Initiative throughout Nevada, Arizona, and California. Currently, the EFC is looking at the finances and viability of installing solar at the Torres-Martinez's casino. Most of the work has gone to the La Jolla Band of Los Suenos Indians near San Diego. Green MBA students are working with the tribe to help them develop a more sustainable economy. First was a business plan for the recycling and transfer station. They are looking for a better way to run the campground, cutting attendance in half and preventing gang attendance. Another business plan is to develop eco-tourism. However, the campground will have to be cleaned up first. Finally, the EFC is helping them with their integrated solid waste management plan. The EFC will be working with the Navajo to help them understand the systems and possibly develop a sustainable wool business and solar power to augment their green economy.

President Throwe said her term as president has expired, and Heather Himmelberger will be president effective immediately. *Ms. Himmelberger* of the New Mexico EFC said all ten regions are now covered by an EFC. Her center is doing Regions 6 and 8. In Region 6, enforcement convened a meeting in Waco about arsenic and uranium violators in Texas. The meeting led to EFC hosting a meeting of stakeholders in Austin. As a result, Texas will be working towards the development of a funders coordination Group in Texas. The EFC will host a meeting in April to facilitate setting up the coordination group.

Carbon Capture and Sequestration Financial Assurance Report

DFO Meiburg announced that the members were given the revised draft of the Carbon Capture and Sequestration Financial Assurance Report, incorporating changes from the previous day's meeting. *Member Haskins* commented that there are a number of subject matter experts at the EFCs and encouraged EFAB members to work with them.

Workgroup Report Out: Water Loss Reduction

Member Terry Agriss reported from the "leaky pipes group." She directed the members to the draft report, Water Loss Reduction Financing, Mechanisms for Drinking Water Distribution Systems. The Workgroup made only minor changes to the report at the previous day's meeting. This report addresses only drinking water, not waste water. The annual investment shortfall in drinking water infrastructure investment is estimated at $11 billion. That shortfall results in poor efficiency and loss of treated water and reactive intervention practices. Frequently, rate structures are inadequate to cover both operating costs and infrastructure investment. The Workgroup determined that even increased investment will not address water losses without adequate management practices and a sufficient business focus of the utilities. In looking at the water loss reductions, a lot of work has already been done; she noted Scott Haskins' work with the AWWA (American Waterworks Association). AWWA puts out numerous publications to help communities look at their water systems, design water audits, and provide other water loss control activities to significantly assist communities in determining the status of their water systems and helping figure out what kind of investment is most useful to make the systems financially efficient. Still, few communities have implemented comprehensive water loss control programs. She drew the members' attention to a series of case studies on communities and states that have implemented water loss control programs.

The workgroup focused on non-revenue water, since there is a difference between real water loss (actual water) and apparent losses (due to accounting or meter errors). Water loss in the US is estimated to be 7 billion gallons per day, but there is a lack of good data on water loss. Communities do not account for water losses in a systematic manner. There are many funding sources in existence: user fees, grant and loan programs including SRFs, and the new Green Project Reserves. Existing programs are listed in the report.

Even increased federal funding is not likely to be enough to address the infrastructure investment shortfall. Improvements will have to come from the water industry improving its business focus and addressing rate-setting practices to support the necessary improvements. The report specifically mentions the recommendations on affordability. She referred the members to the recommendations on page 28 of the report.

1. Improved business focus and effective water control will make the best use of the financial resources available to water utilities. USEPA should encourage utilities to initiate practices to improve asset management and implement environmental management systems.

The workgroup decided specifically to use the word "encourage" instead of "mandate."

2. Increased utility funding will be necessary to initiate, implement, and continue water loss control programs. This can be accomplished through existing fixed mechanisms such as user charges; federal, state, public, and private grant and loan programs; and revenue bonds. New types of funding mechanisms do not appear necessary. However, improved networking and coordination among regulatory agencies and stakeholders may be warranted to utilize the funds available more effectively.

3. Obstacles to implementing utility full cost rate pricing should be addressed. By maximizing the use of reasonable financing mechanisms and incorporating a

household affordability rather than community affordability focus to rate making practices, communities can better meet their capital requirements and minimize the cost burden on their low income residents.

4. EFAB endorses water audit and asset management programs as excellent tools to assist in decreasing water losses. However, whether a state mandates water audits and asset management programs to qualify for SRF funding, it should be determined on a state by state basis. EFAB notes that where Green Project Reserve qualification requires that a business case for improved efficiency be demonstrated, a water audit and an on-going asset management program are the best means of accomplishing a successful business case. States should consider ranking strategies for SRF funding applications that provide an incentive for projects that include implementing water loss control and for systems with existing, successful water loss programs.

In discussion, the Workgroup had modified the second sentence to read, "However, whether a state mandates or provides incentives to perform water audits and asset management programs as part of the SRF funding process, it should be determined on a state by state basis." In the last sentence, "States should consider" was changed to "States may consider".

5. States should be encouraged to implement or clarify requirements for water loss reporting and control. Further, state regulatory agencies should provide assistance for implementing water audit practices, especially for small water supply systems.

Though AWWA's work gives information on how to gather and report the data, there is a significant lack of this data.

6. Consistent with existing practice, the Green Project Reserve guidance should continue to require that "green project" qualification only apply automatically to proactive infrastructure repair, replacement, and/or refurbishment where a business case for improved efficiency must be demonstrated for projects that are not categorically eligible.

The Workgroup changed this recommendation to read, "Water projects that do not automatically meet categorical criteria for Green Project status should still be able to qualify for the Green Project Reserve Program, provided that a sufficient business case for improved efficiency is established." Even in cases with reactive leak repairs, that would not be a categorically approved activity under the Green Project Reserve, but if the community or state can make a business case for why the project should be eligible for green project money, they should have the opportunity.

7. Small water utilities experience additional challenges in obtaining sufficient financing to implement water loss control projects. Regionalization, consolidation, and cooperative partnerships are mechanisms that might assist small utilities to improve their economies of scale, decrease expenses, and

Regulatory agencies can be helpful in guiding small utilities in looking at this. Many communities are hesitant to consolidate, but they should look at cooperative arrangements.

Discussion

Sara Pesek asked about recommendation 4, specifically what ranking strategies the Workgroup discussed. *Member Agriss* said there was not a detailed discussion on that. *Ms. Pesek* said they could have that discussion at a later time as related to her experience in New York. *Member Mason* said the report was intended to be a high-altitude look to avoid being sidetracked in details. *Member Dixon Peay* said the Workgroup was concerned that additional specifics might be mistaken for additional mandates. Regarding the should/may and encourage/mandate discussion, there was concern about increased federalism and about implementation. The Workgroup did not want to be excessively prescriptive above and beyond prescriptions in the Recovery Act. The major issue was to avoid limiting the field of possible solutions. The SRFs have a history of working well at meeting the issues within the states in a federal/state cooperative.

Member Agriss suggested an incentive-based approach to having things such as water audits already completed. *Member Deming* commented that there is an overlap with the Environmental Management Systems Workgroup regarding asset management and the report on environmental management systems implementation. She encouraged the new members to attend meetings outside of their expertise. *DFO Meiburg* added that leaky pipes on the wastewater side is an important issue and a likely follow-up for the Workgroup. *Member Downard* added that the should/must issue will come up in other reports, and it is important because cities, counties and states do not like unfunded mandates. Additionally, “should” allows much greater flexibility.

Member Johnson asked about the issue of policy changes and financing regarding smaller utilities. Many small communities have water issues but have not been helped by the states under the Stimulus Act. Rural areas are often overlooked for finance. It is important to provide some sort of relief for towns too small for HUD block grants and rural areas. Perhaps need should merit extra points in the competition for funds. *Member Agriss* said the Workgroup did not discuss changing policy; it did endorse the benefits of small communities working together to address overall cost. She said states should look at their overall use plan to adequately address need. *Ms. Himmelberger* commented that many small communities do not understand their own needs and do not accurately measure their water losses. Getting communities to measure their water losses accurately is the first step. Defining technologies to address the problem is the next step. Few small systems understand the magnitude of their problems, and states aggregate inaccurate data. It is important to get accurate data and to have comparable measurements.

Jon Clark, staff at the Office of Water, said he hoped for baseline studies on how water is lost and why. It is not clear how much money went to water audits, and it is important that water audits be done. Without measuring the problems, it is impossible to fix them. If EFAB could expand on the SRFs that are addressing their subsidies to green projects, there is a large potential for green projects. He suggested looking at opportunities for green in the future and in the report, since the states and regions will take the work seriously. *DFO Meiburg* said that would be useful as a follow-up project but would not apply to this report.

Member Cobb said for recommendations 2 and 3, people are under extreme economic conditions, and in Arizona, many small communities are retirement-based. There is no way to recover the capital of repairing leaky pipes in these communities through user charges. In those communities, upgrades will stress other revenue mechanisms going forward. That ties into recommendation 3. In Arizona, full cost rate pricing would be politically impossible.

Because there were only minor changes, the Board was willing to have the revised version sent out for concurrence. *Member Agriss* asked whether there should be next steps for the Workgroup, specifically, whether there should be another report on wastewater and wastewater leaking pipes. The Workgroup had discussed ways of preventing costs instead of financing them. The Workgroup could look at demand side reduction, asset management, the relationship between environmental management and asset management systems, and the potential for eco-districts to improve water efficiency. The Workgroup also looked at the impacts of improved coordination between state and local agencies toward reducing costs. Planning was another issue. Some communities avoid planning, but the Workgroup could show the cost effectiveness of planning. The Workgroup also discussed possible management changes to reduce costs. The idea was to develop studies of consent decrees that have been issued and to see what has increased efficiencies.

Workgroup Report Out: Innovative Financing Tools

Member Curley referred the members to the draft report, the fourth in a series. The first was about creating special air quality districts for air nuisances such as truck stops and auto body paint shops. The second and third were on voluntary environmental improvement bonds. This idea developed from Berkeley, where the city lent money to homeowners who wanted to put solar panels on their houses. The city finances the loans with long-term bonds at low interest rates. The solar panel and the loan remain attached to the house, so if the house is sold, the new owner takes over the payments. The reports expanded on that idea, looking at pollution or energy waste that can be addressed by devices paid for in this manner. The first report dealt with business properties, such as replacing numerous boilers and rolling them into a bond. The replacement will bring huge energy savings. The fourth report extends the idea into the not-for-profit realm and local government, such as libraries, hospitals, and schools. He suggested meeting with Environmental Commissioners of the States and the National Association of Clean Air

Agencies to promote these kinds of programs. He noted that if the user of the device for which there is a credit is an exempted entity, the device is not eligible for the Investment Tax Credit. The report recommends that the Internal Revenue Code be amended to allow the credit. Member Curley is waiting for more information about what the results have been in Delaware. He will update the report with that information when he receives it.

Member Wilson said the bonds in Berkeley are secured by liens through normal tax collections, but not-for-profits are often exempt from property taxation. *Member Curley* said a priority lien can be placed on the mortgage. The priority of the lien depends on the state legislature. The liens have to be handled with common sense and be proportional to the property. *Ms. Pesek* suggested Prior Purchasing Agreements (PPAs) as another way to make energy efficiency programs enticing. *Peter Meyer* said HUD is looking at financing energy retrofits on low income housing, and many municipalities have nonprofit independent housing authorities that may be an ally in the recommendation to amend the tax code. *Member Francoeur* said it is important to acknowledge the difficulty of lending to nonprofits. *Member Curley* said the Maryland Health and Higher Education Facilities Authority is there to provide bonds, and the report requires that the nonprofits be credit-worthy. *Member Francoeur* said it is important that the report address manage the tenor of the debt. *Member Curley* said that would defeat the point. *Member Hernandez* suggested language: "in keeping with standard credit review techniques." *Member Curley* said he would work on the language. *Member Meiburg* asked for the Board's feeling on the report. There was general support for the report but some wordsmithing to be done. *Member Hernandez* said timeliness is an issue, so she moved to approve subject to tweaking. This reflected the Board's general consensus, so the report was approved.

Member Marsh said the Workgroup also discussed financing eco-districts. They developed a draft report but were not yet ready to release it. The Workgroup decided to speak with some EPA people to see if EPA would be interested in receiving advice from the Board on eco-districts. Though he was not asking for any action, he gave an overview of the issue. An eco-district is an area where there is an intention to make the area as environmentally sustainable as possible. In Portland, Oregon, there was an intention to develop new or retrofit existing buildings with energy saving or green energy producing systems, utilize rainwater falling on the district for a variety of purposes, minimize waste and restore habitat within the eco-district. One idea is to create an entity within the district to manage the services to maximize efficiencies. That entity might collect and spend fees and manage integrated environmental systems.

A number of issues need to be addressed, including the size of the district and the relationship with existing utilities. In Western states, collecting rainwater is a water rights issue. There is the possibility of creating markets internal to the district. There is the issue of the ability to borrow money or finance infrastructure where facilities cross property boundaries. It may be possible to create offset credits in the district that might be sold externally. There is also the issue of allocating fees and benefits. For privately-financed projects, there is the issue of security. In the future, the Board might make a recommendation that EPA become involved, perhaps helping with technical or financial assistance or as a convener to work with states on model legislation. The Workgroup will report back in August. *Member Agriss* asked about imposing eco-districts on pre-existing districts. *Member Marsh* said the Portland eco-district is a Business Improvement District and has taxed itself before for transportation demand management. It is assessing themselves for part of the cost of the project. *Member Hernandez* said this sort of project could devolve, since the goals are too ambitious. She was concerned about the utopian nature of the projects and their being done on very small scales. She did not want these projects to undermine attempts to make more modest efforts. *Member Marsh* noted that this was still experimental. *Member Hernandez* compared the eco-districts to LEED and said it is dangerous when self-imposed private standards become parts of ordinances. *Member Grodnik* said in Washington State, climate benefit district legislation was shot down twice. Stakeholders were concerned that it was too ambitious. She hoped any recommendation would include other examples of district financing for sustainability. *Member Marsh* said he was interested in PUD in Washington or the BID model. *Member Johnson* asked if the eco-districts tend to work best where people have disposable income. *Member Marsh* said one of the districts in Portland will be an ethnically diverse, low-income district in the outskirts of town, so that will be seen. *Member Francoeur* said she did not see the economic benefit to the property owner. *Member Marsh* said the business owners in Portland want to do feasibility studies, including the possible benefit. For them, part of the motivation is to take a leadership role in enhancing the value of the district. *Member Dixon Peay* said the Board should explore this issue in order to be at the forefront of the effort. *Member Gebhardt* asked if the districts would be voluntary. *Member Marsh* said it is voluntary at this time, but at some point, the issue of including all property owners in the district will arise. *Member Gebhardt* suggested a site visit in the future. *Mr. Meyer* said eco-districts are an institutional form, and this Board usually discusses financial tools. He suggested looking at eco-districts in the context of what financial tools are available. This allows the Board to be useful without worrying about issues such as mandatory or the perfect being the enemy of the good. *Member Marsh* said the Portland eco-district team is assembling a manual to provide examples of financial tools that might be useful to those wishing to form an eco-district.

Workgroup Report Out: Financial Assurance (Cost Estimation)

DFO Meiburg clarified that the Board has adopted the commercial insurance report, and it has been transmitted. In it, the Board agreed that insurance is a potentially valuable financial assurance tool, that one of the central points of insurance is that the state, insured, and insurer have a clear understanding of what is covered and the terms of the policy. The Board agreed that there is value in third party review. Finally, the Board did not see a value in standard language, due to the variability among the states.

Member Francoeur said one thing to look at in August is what is next on the agenda, probably involving commercial banking alternatives. Member Rice will replace Member Downard as co-chair of the Workgroup. *Member Downard* said that, with financial assurance, there is always a specific number to assure. The charge from the Agency was, “How can we increase the reliability of cost estimates?” However, estimates are not right or wrong. They exist along a reliability continuum. To verify reliability, the estimate should be periodically reviewed until there is no need for assurance. The Workgroup discussed products, technology, a periodic review SWAT team, and a consulting group, but these did not work. The Workgroup decided to address improving the process rather than a particular cost estimate. By bringing people from the states, industry, and the Agency, they planned to assemble a group that would come together and update the content of training nationwide. This way, experience is not lost when people retire and to review the tools and to introduce new tools, taking new technology into account. He met with state regulators the day after the meeting to see if they agreed to this. He opened the floor for questions. *Ms. Bowie* from EPA staff reminded the members of the meeting time and place. *Member Downard* added that the next day's meeting was to bring the states in. There will be a workshop including the States, the Agency, and industry at a future point.

Discussion on Workgroup Report: Carbon Capture and Sequestration

Member Deming referred to the draft for the report on Carbon Capture and Sequestration Financial Assurance. She asked for any conceptual differences members might have about the report. There was no response. She said a cleaned-up version would be sent out on Friday and asked that comments be turned in soon. *Member Trabucchi* said it is important to not say that RCRA is not applicable but that it may not be applicable, because the Board does not have the authority to determine RCRA's intent. Her second comment was that the Board has transmitted the insurance report. Third, on the fourth page of the report, there is a paragraph that does not make sense. She said she would e-mail her specific comments. Member Patton, who was not present, had requested that she be emailed a copy of the report so she can give comments. *Member Hernandez* said the sentence on pages two and three about RCRA not being applicable could be dropped completely. *Member Deming* said she would send the clean version to the Board that Friday for the Board's approval.

Workgroup Report Out: SRF Investment Options

Member Gebhardt reminded the Board of the leverage report in 2008. The report mentioned the investment function and recommended that the SRF investment function receive closer attention as a critical part of the "how to pay" question. The Workgroup is working in relation to that report and looking at how to get all possible value out of the SRFs without coloring it with issues that would undermine the funding capacity to deliver the value SRF was designed for. There are three parts of the investment function:

1. Provisions in the Clean Air and Drinking Water Acts detail how the fund dollars can be used: for loans, to purchase obligations, to buy private guarantee insurance or to stand behind an SRF guarantee, to create sub-state revolving funds, for administrative fees, and to earn interest. When dollars are not being used for any of the other purposes, they are generally invested to earn a return.

2. The equity dollars can be used to fund loans that provide security support for any bond issues the SRF administrators would offer for the purpose of raising additional money to

lend to local governments and private utilities. This is not used universally. Many SRFs use the program equity to provide only direct financing. A second approach is to issue a bond and put the federal money in a reserve account, which is then invested. In 2008 the problems with this second approach became evident with the weakness of many commercial investment providers. In some cases, private providers were replaced by public providers.

3. The third iteration of the investment function is based on a modification of standard leveraging models where a portion of program equity is invested for yield. However, the investor is only allowed to keep the amount of earnings up to cost of funds. Any interest over the cost of funds goes back to the Treasury. As programs have matured and equity has built up, there is an opportunity on the investment side. It is possible to set up a sinking fund reserve invested at the cost of funds which matches the present value of all the future interest subsidy payouts. That financial assistance would equal annually the 50 percent interest subsidy target. Use of the sinking fund conserves capital that can be invested at unrestricted yields which efficiently recoup the scheduled sinking fund payout and frees up capital that can be allocated to support additional projects. When compared to traditional leveraged models. For SRF compliance purposes only recycled dollars are used for the unrestricted investments.

Essentially, the funding is being leveraged up without sacrificing the financial assistance. The 50 percent subsidy target is still being met. This raises the questions of, if SRFs can leverage in this manner, what is the true value of the investment function, what are the states are authorized to do, and what might they do in the future to further enhance capital savings and project funding capacity? The value of the report is to look at the data across the states and develop a matrix of each SRF's investment authorization. The report looks at the investment of idle funds, pledge reserves, and the relative prospects of states regarding investing long term in the equity account in the context of the leveraging models. The leveraging programs are varied: some restrictive and some with a broad reach.

He said the recommendation will probably give encouragement to the states by demonstrating what needs to done with the funding models to take advantage of the new financial architecture. If the states take advantage of the new financial architecture, they need to know what they should be looking at with respect to their investment authority. Considering the liabilities that the SRFs are contracting for, the question is how to make good on those liabilities. With the direct loan model, the SRFs take on those liabilities by suppressing the return on their investments to those local governments, charging little or no interest. Under the leveraging model, the financial assistance is delivered in the form of an investment in eligible investments or with commercial providers, or bonds. Those are the ingredients to work with. With 20 or 30 years of financial assistance to pay out, you look for investments that will deliver an earning stream to meet that and recoup the capital. The question is whether to limit the investments to fixed income or to entertain other asset classes. In this report, the Workgroup looked at several funds. The Texas School Permanent Fund have the full range of asset allocation they can invest in and have shown returns much higher than if they had stuck to fixed income. The Great Lakes

Protection Fund also has a broad asset authority and a demonstrated record of returns. The Workgroup, going forward, will run analyses of the SRF funding models in the context of building out investments limited to fixed income and to model broader asset authority over 20 or 30 years. Member Gebhardt recognized those who contributed to construction of the report. Subject to ongoing dialogue, there will be a final report at the August meeting.

Discussion

DFO Meiburg said this is part of the push to make SRF money work as hard as it can. The Board does not opine on the size of the grants, which is a political matter, but the Board did feel the responsibility to make the money work as hard as possible. SRF managers are held to much higher standards than pension managers. More and more, SRFs are using recycled funds, which are not subject to the arbitrage restrictions. The Board has a contribution to make to the Agency in framing the debate on whether or not the money is working as hard as possible. For that reason, the issue merits a thorough discussion. *Member Gebhardt* said equities do not have to be the only asset classes used. Direct financings are done first, and the balance is used to support leveraged financing. The sinking fund allows a portion of that balance to generate returns. *Member Hernandez* said this work will be valuable when the Carbon Capture Workgroup undertakes financing for long term care. *Member Keith Hinds* asked how much money is sitting in reserve funds around the country. *Member Gebhardt* said it was probably around 10 billion. *Member Dixon Peay* said that is a volatile question and the information was intentionally omitted. States have varied levels of control and liquidity, and the modeling will give more information and background. *Member Agriss* said it is difficult to know how much money is there because money in reserve can still be working.

Member Thomas Liu pointed out that short term rates are currently very low. Some SRFs are investing at less than 0.5 percent interest while their associated cost of funds is between 3 and 4 percent. Any inefficiencies are a drag on the program. Also, many providers provided investment contracts from AIG, so many SRFs “lost” money in the crisis. SRFs had been looking at liabilities; now they should look at growing the assets. SRF administrators and state treasurers should be educated on investments. The workshop is a timely and important program. *Member Francoeur* reminded the Board that the money does not belong to the state but is bondholder money, and the state has a fiduciary responsibility to the EPA as well. Preservation of capital should be the primary objective. She further warned of the dangers of alternative investment structures. *Member Gebhardt* said preservation of capital will continue to be a primary responsibility. However, the dollars sitting in the equity account do not affect the bond ratings, though they may in the future if SRF guarantees are done. In that case, the long term investment portfolio will be a factor. Broadening the portfolio can affect the cash flow coming out of the portfolio, but the assets on the books will still be assets. *Member Downard* warned against putting the large dollar figure (of SRF assets) in the report, since people will want a piece of that money. *Member Dixon Peay* said the Workgroup is looking at what is happening and providing a framework. Another concern is the sustainability of the fund. If investment is not done, the subsidy is being negatively impacted. *DFO Meiburg* said the next step is the revised final draft in August.

Public Comment

DFO Meiburg opened the public comment portion of the meeting. There was one presenter: Robert C. Weaver, Esq. of Kelly & Weaver, P.C., which represents water/wastewater utilities on funding and legislative and regulatory issues. He said there have been concerns about states potentially using SRF money to balance state budgets. Since Congress enacted the National Clean Water Act, most of the costs of implementations were paid by local governments and rate increases. Congress established the Wastewater Construction Grant Program and SRFs to assist and as a political support for the requirements. The future of SRF grants depends on federal budget policy going forward in a time of high deficits. The 2011 budget shows continuation, but the allocations are made annually. In 2006, Congressman Oberstar asked the GAO to prepare a report on options for dedicated revenue for a national clean water trust fund modeled on the highway and transit trust funds. The report came out in 2009, recommending four classes of dedicated revenue for a clean water trust fund: excise fees on flushable products, fertilizers, pesticides, pharmaceuticals, water appliances, and plumbing fixtures; an increment of the corporate environmental income tax; a water use tax based on volume levied on governments and utilities; and an industrial discharge tax. The water use tax was rejected as too difficult to collect. The other income sources were worked into a bill introduced in July of 2009 to establish a national clean water trust fund, the Water Protection and Reinvestment Trust, which would collect 10 billion in new dedicated revenue for construction and implementation of the requirements of the previous acts. The bill has 30 bipartisan cosponsors. There will be further hearings this year and more examination of other revenue sources. This fund would be the best insurance of continuing capital grants to the SRF programs. The majority of funding will continue to come from local rate increases. He urged the Board to advise the Administrator to look at the opportunities presented by HR 3202 and other legislation on the issue. He left copies of the GAO report with the Board.

Ms. Pesek asked if there has been a study on a national infrastructure bank. *DFO Meiburg* said there had not been.

Meeting Summary

DFO Meiburg summarized the results of the meeting and touched on next steps. On the Carbon Capture and Sequestration Report, the updated draft will be redistributed by the Friday following the meeting. The members should respond by the 26th so the report can be transmitted. The Water Loss Workgroup will distribute a revised draft and the Board will adopt it by email. The Financing Energy Efficiency by Nonprofits Report was adopted and will be transmitted, pending minor language revisions. The SRF Investment Options Report will be ready in a final version for the August meeting.

Potential future agenda items will be discussed at the August meeting, but at this meeting, there were a few possible items raised: long-term stewardship of carbon sequestration, several possibilities for future work for the Water Loss Workgroup, further discussion of eco-districts, and the charges from Assistant Administrator McCarthy. The Board has many opportunities to choose from in August. Because many experienced members are outgoing, there will be vacancies for chairmanship in many workgroups. He encouraged the new members to join workgroups that interested them. There is the report on past EFAB actions to get out and publicize. There was the workshop on cost estimation on the day following the meeting, and there is the August Board meeting. Some members have suggested holding the meeting somewhere other than San Francisco, including near an eco-district, such as in Portland. *Member Deming* pointed out that it is important that the meeting be near an EPA office to facilitate regional participation. *DFO Meiburg* asked the members to communicate to him any suggestions or objections as to meeting site by the end of the week. The next meeting is likely to be on August 9 and 10.

Adjournment

DFO Meiburg commented on the legacy the outgoing Board members have left, recognizing the Chairman especially. *Chairman Barnes* said the Board, staff, and Centers should be proud of the contributions they have made. Having met the new members, he said these contributions would continue. *DFO Meiburg* adjourned the meeting at 4:07 p.m.

Appendix

Attendee List

EFAB Members Present:
Chairperson:

- A. James Barnes, Professor of Public Environmental Affairs, Indiana University, Bloomington, IN

State and Local:

- Kelly Downard, Chairman, Louisville Metro City Council, Louisville, KY
- James Gebhardt, Chief Financial Officer, NY State Environmental Facilities Corporation, Albany, NY
- Gregory Mason, Chief Operating Officer, Georgia Environmental Facilities Authority, Atlanta, GA
- Karen Massey, Deputy Director, Missouri Environmental Improvement and Energy, Jefferson, MO
- Sharon Dixon Peay, Financial Administrator, Hartford, CT
- Andrew Sayers, Program Administrator, Maryland Water Quality Financing Administration, Baltimore, MD
- Douglas P. Scott, Illinois Environmental Protection Agency, Springfield, IL
- Justin Wilson, Comptroller of the Treasury, State of Tennessee, Nashville, TN

Business and Industry:

- Terry Agriss, President, TAgriss Advisory Services, New York, NY
- Scott Haskins, Vice President, Global Water Business, Group CH2M Hill, Bellevue, WA
- William Cobb, Vice President, Freeport-McMoRan Copper & Gold, Inc.
- Cherie Collier Rice, Treasurer and Vice President of Finance, Waste Management, Inc., Houston, TX
- Leanne Tobias, Principal, Malachite, LLC, Bethesda, MD
- Dr. Jim J. Tozzi, Director, Multinational Business Services, Inc., Washington, DC
- Chiara Trabucchi, Principal, Industrial Economics, Incorporated, Cambridge, MA

Banking, Finance, and Legal:

- Bradley Abelow, Partner, NewWorld Capital Group, New York NY
- Michael Curley, Executive Director, The International Center for Environmental Finance, Towson, MD
- Rachel Deming, Partner, Scarola Ellis LLP, New York, NY
- Mary Francoeur, Managing Director, Assured Guaranty Group, New York, NY
- Ann Jennifer Grodnik, Assistant Vice President, Public Finance, Seattle-Northwest Securities, Seattle, WA
- Jennifer Hernandez, Partner/Co-Chair, National Environmental Team, Holland & Knight, LLP, San Francisco, CA
- Keith Hinds, Financial Advisor, Merrill Lynch, Albuquerque, NM

- Thomas Liu, Managing Director, Bank of America Merrill Lynch, New York, NY
- Jay Spector, Financial Officer, Wells Fargo Advisors, LLC, Scottsdale, AZ

Associations, Organizations, Academia, and Public Interest Groups:

- Scott Anderson, Consultant, Senior Policy Advisor, Environmental Defense Fund, Austin, TX
- Dr. John Boland, Professor Emeritus, John Hopkins University Department of Geography and Environmental Engineering, Baltimore, MD
- Philip Johnson, Director of Programs, Sustainable Community Development Group, Washington, DC
- Deborah, Livesay, Water Resources/ Wetland Managers, Salton City, CA
- Langdon Marsh, Fellow, National Policy Consensus Center, Portland State University, Portland, OR

Environmental Finance Consultant:

- Mathilde O. McLean, New York, NY

Designated Federal Official:

- Stanley Meiburg, Acting Regional Administrator, Environmental Protection Agency, Atlanta, GA

Environmental Finance Center Network:

- Joanne Throwe, President EFCN, University of Maryland, College Park, MD
- Sam Merrill, Director, EFC, University of Southern Maine, Portland, ME
- Sara Jade Pesek, Director, EFC, New York, NY
- Jeff Hughes, Director, EFC, University of North Carolina, Chapel Hill, NC
- Lauren Heberle, Director, EFC, University of Louisville, Louisville, KY
- Kevin O'Brien, Director, EFC, Cleveland State University, Cleveland, OH
- Heather Himmelberger, Director, EFC, Albuquerque, NM
- Angela Buzard, Director, EFC, Wichita State University, Wichita, KS
- Sarah Diefendorf, Director, EFC, Dominican University of California, San Rafael, CA
- William Jarocki, Director, EFC, Boise State University, Boise, ID

EPA/EFAB Staff:

- Vanessa Bowie, Staff Director, Center for Environmental Finance, Washington, DC
- Aileen Atcherson, Analyst, Center for Environmental Finance, Washington, DC
- Alecia Crichlow, Analyst, Center for Environmental Finance, Washington, DC
- Susan Emerson, Analyst, Center for Environmental Finance, Washington, DC
- Vera Hannigan, Senior Analyst, Center for Environmental Finance, Washington, DC
- Sandra Keys, Analyst, Center for Environmental Finance, Washington, DC

- Timothy McProuty, Program Analyst, Center for Environmental Finance, Washington, DC
- Pamela Scott, Analyst, Center for Environmental Finance, Washington, DC
- Jon Clark, Office of Water, Washington, DC

Expert Witnesses:

- Peter B. Meyer, President and Chief Economist, The E. P. Systems Group, Covington, KY

USEPA Presenters: Maryann Froehlich, Deputy Chief Financial Officer; Gina McCarthy, Assistant Administrator, Office of Air and Radiation; Peter Silva, Assistant Administrator, Office of Water; Barbara J. Bennett, Chief Financial Officer.

Public Presenter: Robert C. Weaver, Kelly & Weaver, P.C.

Agenda

U.S. ENVIRONMENTAL PROTECTION AGENCY
Environmental Financial Advisory Board

March 16, 2010
AGENDA

8:00 AM – 12:30 PM WORKGROUP MEETINGS

12:30 PM **LUNCH**

1:30 PM Opening Remarks/Introductions…………………………… Jim Barnes, Chair
Stan Meiburg, DFO

1:45 PM EPA Priorities……………..……………………….…….. Maryann Froehlich
Deputy Chief Financial Officer

2:30 PM EPA Air Priorities and Themes….…………..……………..Gina McCarthy
Assistant Administrator
Office of Air and Radiation

3:15 PM **BREAK**

3:30 PM EPA Water Priorities and Themes………..…………………….…...Peter Silva
Assistant Administrator
Office of Water

4:15 PM **WORKGROUP REPORT OUT**

Carbon Capture and Sequestration……………………………. Jim Tozzi
4:55 PM Day 1 Summary…..………….……….……………………….Jim Barnes
Stan Meiburg

5:00 PM **ADJOURN**

6:00 PM Group Dinner

U.S. ENVIRONMENTAL PROTECTION AGENCY
Environmental Financial Advisory Board

March 17, 2010
AGENDA

9:00 AM	Opening Remarks……….…………………………………..……Jim Barnes	
		Stan Meiburg
9:15 AM	EPA FY 2011 Budget Priorities……..……..….………Barbara J. Bennett	
		Chief Financial Officer
10:00 AM	Environmental Finance Center Network Update................. Joanne Throwe	
		President, EFCN
11:00 AM	**BREAK**	
11:15 AM	**<u>WORKGROUP REPORT OUT</u>**	
	Water Loss Reduction….……..…………………...…..…….. Terry Agriss	
12:00 PM	**LUNCH**	
1:30 PM	**<u>WORKGROUPS REPORT OUT</u>**	
	SRF Investment Options... Jim Gebhardt	
	Financial Assurance (Cost Estimation) ……...…………..…. Mary Francoeur	
		Kelly Downard
2:45 PM	**BREAK**	
3:00 PM	**<u>WORKGROUP REPORT OUT</u>**	
	Innovative Financing Tools………..…..…………………. Michael Curley	
		Lang Marsh
3:45 PM	**PUBLIC COMMENT**	
4:00 PM	Meeting Summary……..……….……..………………………. Jim Barnes	
		Stan Meiburg
4:15 PM	**ADJOURN**	