United States Environmental Protection Agency

Office of the Chief Financial Officer

Center for Environmental Finance

Meeting Summary of the Environmental Financial Advisory Board (EFAB) March 8 - 9, 2011

Held at the

Crown Plaza Hotel

Alexandria, VA

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Environmental Financial Advisory Board

Meeting Summary

March 8-9, 2011

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Day 1 - Tuesday, March 8, 2011

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

Opening Remarks and Meeting Overview

Bradley Abelow, Chairman welcomed everyone and called the meeting to order. He introduced himself and provided a brief overview of the agenda, including upcoming reports of work groups. He noted in particular a presentation by *Barbara Bennett, EPA's Chief Financial Officer*, scheduled for later that afternoon. He then had everyone introduce themselves.

Michael H. Shapiro, EFAB Federal Designated Official (DFO) welcomed the participants, introduced himself, and thanked the EPA staff who had organized the meeting. He said that this is his second round as DFO. He complimented EFAB as always having been a producer of strong advice.

He suggested that there might be opportunities for discussion of topics in addition to those on the agenda. He also reminded everyone that key members would be rotating off at the end of this meeting and that the Board was awaiting approval of new members by the EPA Administrator. He said there was no firm date set for the August meeting at that time.

Michael Shapiro then introduced *Charles Imohiosen, Counselor to the Deputy Administrator*, who is representing the Administrator's office.

Charles Imohiosen thanked DFO Shapiro for the introduction. He described environmental technology, and the nexus of this technology and the financial community, as areas that the Administrator's office would be focusing a lot of attention on in the coming year. He also suggested that a number of new, interesting agenda items would likely be coming out of the Administrator's office in the next few weeks.

Discussions

Environmental Finance Center Network (EFCN): Effective Public-Private Partnerships to Create Winning Solutions

Heather Himmelberger, Director of the Environmental Finance Center (EFC) at New Mexico Institute of Mining and Technology, opened the discussion. This presentation is about public-private partnerships and collaborations in water, land, air, and international issues. Each Director of the EFCN will make a presentation. Prior to the meeting, a two-page description of the EFCN and handouts of the work of a number of EFCs was distributed.

The public discussion on water resources is polarized because of the current widespread public sentiment, fostered by the media, that the private sector can do no wrong, and the public sector cannot do anything right. But this concept is not really useful. Both the private and public sectors have useful roles, each needs to recognize what the other one does well, and therefore, there is a need to change this public conversation. For example the public sector could learn a lot about marketing from the private sector. However, the public sector, when mobilized, is very good at changing the attitudes of people on critical public issues such as those related to health. The "national bully pulpit" techniques of successful public campaigns of the past increased use of seat belts and brought about a prohibition of smoking in public places could be usefully brought to the environmental arena. There is a need to persuade consumers of the real value of water from their taps, and therefore, the need to pay higher water rates. This would bring badly-needed funds to the water and wastewater infrastructure sectors.

The respective skills and strengths of the private and public sectors need to be brought together and be much more partnership-oriented. To have good economic development, it is necessary to have water and wastewater infrastructure that is in good shape and reliable and badly-needed upgrades nationwide need to be paid for. There are widespread notions that businesses, for example, will not pay higher water rates; that they see water and wastewater services as a good that should be very low-cost. But, what private business *really* does not want is uncertainty; and that in the water and wastewater arena, private businesses need to know what they will be paying and what they will get for their money. For example, businesses might respond positively to medium-term increases in water rates if they knew by how much these rates would increase year by year. The removal of uncertainty—in this case, in water rate increases----is sufficiently important to them that private businesses would by and large agree to increased water rates. In conclusion, the EFCs are very well positioned to create a bridge between the private and public sectors on key environmental issues, and to bring them together -- in particular for much more collaboration between the public and private sectors on water and wastewater issues.

David Eberle, Director of the Environmental Finance Center at Boise State University, discussed a partnership that is being formed in the Boise area that should be of interest to EFAB, and to the EFCs in general. The partnership that is emerging is between the agricultural sector and the Boise municipality. Its purpose is to remove sediments and phosphates from irrigation water more efficiently than by running the water through a municipal treatment plant before it goes back into the river basin. He explained that what is involved, is sediments and nutrients being removed from an irrigation lateral canal before the water is discharged back into the Snake River. The big problem is that the Snake River is currently overloaded with sediment and nutrients from agriculture. Moving the sediments and nutrients from the irrigation laterals is as efficient a method as taking the last 10 percent out of the local point-source urban treatment plant; and for six times less the cost. What is really being attempted here is to find what is called an "equi-final" solution to meet EPA regulations regarding discharges of irrigation water into rivers.

In more general terms, the lessons of this partnership are:

1. The need to move from a purely regulatory-based system of enforcement and move toward more criteria-based enforcement.
2. All partnerships ultimately occur at the local level, so there is a need to empower the relevant parties that are going to oversee this to ensure that local entities have the ability to craft whatever partnership are going to emerge.
3. Financial incentives are not always required to find solutions.

Angela Buzard, Director of the Environmental Finance Center at Wichita State University discussed an energy management initiative related to water and wastewater. She described a project that her EFC is involved in: development of an Excel-based tool designed to help small cities conduct an energy audit of their water systems. The Wichita EFC staff completed the tool's beta test in February. The tool is aimed at helping municipalities lower their energy consumption, which will lower their costs and reduce greenhouse gas emissions. The goal of the project is to work with the participating municipalities individually -- doing energy audits, using the Energy Star portfolio of tools, etc. The EFC's role is looking at financial assistance: how the implementation of the energy efficiencies that the audits have identified can be financed. The emphasis here is on "thinking outside the box" for funding sources instead of relying on local government funds and EPA funding to do these projects.

Siemens AG is the EFC's technical assistance partner. EPA Region 7, certain state agencies and local utilities are also key partners. In addition to Wichita, the EFC is also starting to work with eight communities in Kansas.

Sara Jade Pesek, Director of the Environment Finance Center at Syracuse University discussed an initiative related to stormwater overflows. Onandaga County in central New York State is under an administrative consent judgment (ACJ) for pollution of Onandoga Creek and Onandaga Lake in the county from stormwater overflows. Under a revised consent judgment, it has now been written into the ACJ and approved by the judge that the county will now use green infrastructure to reduce storm water overflows. Plans have been scrapped to use traditional treatment facilities and traditional holding tanks for the stormwater and the emphasis will be on an interdisciplinary approach with both "green" and "gray" treatments. Now that the county is committed and legally required to take a new approach to stormwater overflows, some public-private challenges are being encountered. There are a number of significant jurisdictional issues that are arising as attempts are made to deal with the stormwater issue. One of these is that, Syracuse, the county seat, is where the worst storm water overflows are occurring and a lot of projects have to take place on city property. The problem is how to negotiate the maintenance agreements. Another one is that, since the water overflows are not only on public land, it is necessary to work with private companies and homeowners to try to figure out a distributed system for stormwater capture and re-use.

With regard to financing, there are some examples of projects that are now moving forward. The Green Innovation grant program has allowed investment in a variety of different properties that will help address some of the stormwater overflow issues. In addition, the county now has something called the Green Innovation Fund to which private property owners can apply for money to cover the cost differential between the "gray" systems and the "green" systems. This is one way in which the EFC is trying to increase investment in private property so that private parcels can participate in this stormwater overflow management program.

There is also significant investment in education for homeowners and businesses, as well as in technology transfer. Research deployments are being conducted to assess the effectiveness of the "green" infrastructure installed so far.

Lauren Heberle, Director of the Environmental Finance Center at the University of Louisville, discussed land issues. The Louisville EFC, for a long time, has done a lot of work related to brownfields and urban revitalization, brownfields liability and environmental insurance, and the development of some very interesting financial tools. Land conservation and land revitalization requires public-private partnerships because so much land is typically privately held. Her EFC has developed a host of interesting tools to move these types of partnerships forward, though creating them is a little bit more difficult in the current economic downturn. However, in the brownfields community, those who have been successful have done so in upside-down markets; they have developed creative, innovative, and interesting tools for doing such things. There is a lot to learn from the experiences of urban land areas that have done revitalization work, and the Louisville EFC is trying to draw on this in its own efforts.

The Louisville EFC is continuing its urban revitalization efforts and trying not to let momentum stall in the current climate of municipal funding constraints and constraints in the lending markets. Pulling in all the things that have been learned over the years has come to play an interesting role in the resurgence of urban agriculture and the new interest in developing and supporting urban agriculture on abandoned lands. It is not just cities that are interested, but areas on the periphery of cities as well. The Louisville EFC is getting inquiries from non-urban areas about how land can be re-used safely, so it has been doing a lot of work educating people about such issues as safe soil. Also if the lot in question previously had a house on it, asbestos and other contaminants can be an issue, so Louisville is providing education on that. The EFC is trying to ensure that interested groups get this training as they set up partnerships between municipalities and the private sector to get land revitalization initiatives off the ground.

One very interesting example from Louisville is that a group of private funders are in the process of creating a fund that is going to be attached to a set of public incentives. This is based on the model of the old enterprise zones but the emphasis is on encouraging urban agriculture. The money for this is coming from the private sector, which is going to attach that money to small entrepreneurs. It is a little bit like a micro-lending project in many respects. The EFC is encouraging people to start thinking about these new, small, entrepreneurial financing mechanisms that can continue to help the urban core.

Kevin O'Brien, Director of the Environmental Finance Center at Cleveland State University, said that one of the land-related projects that the Cleveland EFC has been working on is on the nexus of where land and stormwater come together. The Northeast Ohio Regional Sewer District is under a consent degree to create a $3-billion system for dealing with combined sewer overflow (CSOs) and stormwater. One of the strategies that the District was able to negotiate with EPA was to use green infrastructure for replacement of large-scale cement development. The Sewer District asked the EFC to brainstorm with them and land conservancies, land banks, with Kent State Urban Design Center, with an infrastructure engineering consultant, and with other environmental finance centers to talk about all the disciplines required to look at abandoned land in greater Cleveland.

The EFC found out that there were 22,000 vacant lots in Cleveland proper, and another 20,000 in the inner ring suburbs. Most of these were in the newly-created commercial-industrial land bank. The EFC looked at the geography of these parcels, to see if they lined up with the needs of stormwater flows management. The EFC has been developing strategies for land acquisition and assembly for this purpose. As part of this exercise, the EFC has been looking at innovations across the country related to assembly of land and at the same time looking at the use of that land for creating neighborhood gardens and creating square block parks.

With 40,000 vacant lots, the EFC will be able to even create a couple of "central parks" as well. A hydrologist is helping the EFC to determine how much land is needed and the percolation levels of the land. Often the EFC does not know how pervious the surface is because of Cleveland's past practice of plowing down abandoned homes and leaving the foundation and what was below the foundation behind. A key function of the EFC's efforts is bringing together the knowledge communities of local universities with city, county, and state government to achieve an environmentally sustainable re-use of abandoned urban lands. He described this as a "great effort" of the Northeast Ohio Regional Sewer District.

Joanne Throwe, Director of the Environmental Finance Center at the University of Maryland, continued a discussion from a previous EFAB meeting about "cleaner trucks" initiatives related to improving air quality.

For the purposes of improving air quality by replacing older trucks servicing the Mid-Atlantic Ports, the Maryland EFC is working with the Mid-Atlantic Regional Air Management Association (MARAMA) and has a grant of $3.3 million to build a Dray truck replacement program by leveraging private sector partnerships to help improve air quality associated with the use of clean diesel 2007 or newer trucks in four ports: Baltimore, the Port of Virginia, Wilmington, and Philadelphia. By engaging the shippers, carriers, owner/operators, and Port communities in this program, the EFC is helping to assist with building a voluntary program that will provide good financing terms to an underserved and hard to reach community by partnering with the public and private sector. With leveraged funds, we are able to offer $15,000 down payment towards the purchase of a new truck. The University of Maryland EFC has been able to establish a relationship with four lending institutions offering lower rates to their Mid-Atlantic applicants as well as build a partnership with truck dealers who can provide newer trucks at affordable prices. This is a great example of building public-private partnerships in a voluntary EPA sponsored program.

Jeff Hughes, Director of the Environmental Finance Center at the University of North Carolina (UNC) at Chapel Hill, discussed the EFC's work with a lot of state and local governments now that are trying to increase the available capital for energy efficiency investments at the residential and commercial levels.

Jeff Hughes mentioned that one option that is always on the table is a state or local government funded revolving loan fund, but in this case, given the amount of need compared to the amount of funding that is available, a revolving loan fund would be insufficient. The UNC EFC and its partner governments are promoting a different credit mechanism, a loan loss reserve fund. The way this works is that the EFC's partners sign agreements with banks to cover a percentage of first losses. He described this as important, because this type of consumer lending is largely untested. A lot more is known about default rates on car loans than on default rates on insulation loans. The EFC hopes that there is a lot of pricing going on that is assuming the worst, and is working with a lot of state and local governments to pledge pots of money to cover first losses. Since the program began, the EFC has seen decreases of 2-4 percent in the interest rates being offered on these loans. These lending programs are being designed right now for four states and for local governments, and that each program is a little different. The effort is getting leverage reaching in some cases as high as 20 to 1, but the program is still at a very early stage.

Sarah Diefendorf, Director of the Environment Finance Center at Dominican University of California, discussed the international environmental finance arena. The Dominican EFC has been working with the United Nations Development Program (UNDP) on a fairly big research project on financing environmental improvements in developing countries. It has involved months of primary research in developing countries around the world, and secondary research. The latter consisted of looking at about 80-100 different case studies. These have been winnowed down to about 40-45 case studies in sustainable agriculture, protected areas, sustainable forestry, and "pro-poor" energy.

As a result of this research, the EFC and UNDP have concluded that there is no magic financing tool that will solve all environmental financing problems in developing countries. Every single one of the case studies revealed the need to start from a completely bottom-up approach. In developing countries, this includes the need to develop local buy-in, community buy-in, community support, and community involvement. Top-down approaches never really work. It is also necessary to be able to create program-specific internal infrastructure and capacity. This can include policies, laws, communication, education, and especially, roads. Roads are critical to many of these sorts of projects. In the case of sustainable energy and agriculture, it is also necessary to develop production and distribution systems, as well as sales facilities for the products that need to be distributed at the grass-roots level to achieve the desired environmental objectives.

Finally, ramp-up funding has been critical in every single one of the case studies. Typically, government and non-governmental organizations (NGOs) initially provide grants to start the ramp-up phase. After this, NGOs usually come in to help build capacity. After this, the private sector is typically willing to become involved. This pattern was found in almost every case. As an example, two case studies were described: an unsuccessful one to introduce solar homes in Botswana, and a successful program of remote rural electrification program in India.

Heather Himmelberger, president of the EFCN, said that EFCs have to look everywhere for funds and participation, particularly in the current difficult economic times; that the EFCs need to look beyond just public and private sources.

Questions:

Bradley Abelow asked whether there was any collective sense that the concept of public-private partnerships was losing currency. He also asked if there are different ways that different members of these partnerships can collaborate and do what they do best; referring, in a parenthetical statement, to the need to collaborate with private sector entities because of the need to attract funding sources for partnership projects.

Heather Himmelberger said that she thought public-private partnerships were not losing meaningfulness, because the concept of it was evolving. In the context of her own experience with them, she said that early on – in the mid-1990s – the partnerships were very narrowly focused. But she described recently created partnerships as more open-ended and dynamic collaborative relationships by comparison, and the public entities that typically participate in them are being much more receptive to participation.

Leanne Tobias asked if any of the EFC-sponsored programs described in the presentation were creating any jobs, adding that urban agriculture and landscaping jobs, as well as energy audit jobs, often result from EFC activities. *Heather Himmelberger* said that in the experience of the New Mexico Tech EFC, urban agriculture creates all kinds of possibilities for job training. Heather also described a frequent mismatch between municipalities participating in partnerships and their expectations for the partnerships to increase the number of extremely highly technically skilled in their populations, and the fact that the people available to take part in training opportunities frequently do not have the more basic skills necessary to fulfill these expectations, even if the partnership could provide them. Urban agriculture initiatives actually have the potential to do some of the

work of providing such basic skills to people right away and they also have the potential to build into them higher-paying, higher-quality jobs; for instance, through brownfields job training programs and environmental clean-ups. In this context, convincing skeptics that an urban agriculture initiative is not “just a community garden” is important.

Sara Pesek said that the Syracuse EFC's program also has a job-creation component, particularly in the last year or two, through ecological risk assessment. In upstate New York, the EFC and its partners are trying to attract clean and renewable energy companies, and in light of the difficulties of this, the EFC is working with communities of color to do job training for youth, and that a significant portion of the money for education and outreach of the larger program is being used to train young people. Also, one of the partners, the Environmental Science and Forests School of the State University of New York is conducting something called "green training," specifically green infrastructure and landscape architecture types of on-the-job training, focused on immigrants and the Syracuse area's large refugee population. These programs are all through grant funding. The EFC is still having trouble figuring out where the trainees go after they have gone through these various training programs, and the Syracuse area does not have enough large companies to absorb the graduates of these programs. This is a potential failure of any green jobs initiative in the country: finding enough slots in the private sector to employ graduate trainees.

Kevin O'Brien added a different perspective on the subject of EFC public-private partnerships and job creation. Cleveland, like a lot of other old, industrial cities, has a surplus of land. There was a need to be able to assemble parcels in these cities so that municipal and local governments could attract business to these re-furbished properties. But an obstacle to this is that Cleveland, like its counterparts, has too much abandoned land, and that this reduces the price and value of the broad inventory. By removing land for parks from the inventory of land that can be re-developed, as the EFC's partnership is doing, the remaining properties should have an enhanced value. As the EFC's partnership progresses in the Cleveland program, it is assuming that the value of remaining parcels will increase. Hopefully, this will bring with it better opportunities for leisure in neighborhoods, but also opportunities for businesses to develop and for the "new" commercial lands created to increase in value; with their occupants eventually paying more taxes, and creating more opportunities for employment.

Jeff Hughes mentioned that the Brookings Institute had just produced a report on the socio-demographic profile of people who enter training for green jobs and where these people are finding jobs. The Syracuse EFC's focus on training exemplifies the importance, in the context of EFCs' activities, of public education. The report states the necessity of being committed to green infrastructure and associated training opportunities for local people, because companies will not set manufacturing facilities, etc. in an area if there is no ready cadre of appropriately trained workers.

Leanne Tobias said that a possibility that one of the larger lessons for EPA with respect to policy-making – she suggested it would be a very nice project for EFAB if there is interest – would be to summarize some of the activities at the EFC level and to distill the principles thereof that make projects successful. The idea is that EPA then might wish to make use of such summaries in some of its planning.

Scott Anderson said that an example of successful public-private partnerships was in Cincinnati, which is operating under a $3 billion consent decree. What Cincinnati has done is identify what skills are required to implement related projects. The city is partnering with small businesses and other types of agencies to make sure that the required skill sets are available in the local labor markets when the need arises. In relation to this, appropriate data mining can help public-private partnerships.

Philip Johnson, said that EFAB needed to be cognizant of the fact that the growing emphasis on green development is going to shake out a lot of companies that have not made the paradigm shift to "green." In structuring public-private partnerships, it is necessary to remember that there are companies that are not going to be able to make the change to "green" requirements and expectations, and it is necessary to find the companies that are already engaged in this manner. He suggested that public-private partnerships need to seek out these new, forward-thinking companies as partners, and not waste their time on older, more conventionally-minded companies.

Heather Himmelberger made a final comment with respect to job creation related to water and wastewater infrastructure and the aging of the U.S. workforce. Study after study shows that the workforce is aging rapidly and that at some point the U.S. economy is not going to have people available to fill the jobs left open by retirement. There is a real disconnect here: a need for trained people on the one hand, and people who need jobs. The EFCs are not making the necessary connection between the two, and messaging and social marketing have a critical role to play to bridge this gap.

Potential Water Project(s)

James Gebhardt described his extensive background with state revolving funds (SRFs) and what he has learned about the financing of water and wastewater projects as a result. He is now working on a project to provide better insurance for bonds issued by water and wastewater facilities to upgrade their infrastructure. On March 1 he had an extensive conversation with *George Ames, Chief, SRF Branch, EPA's Office of Wastewater Management* and with *Peter Shanahan of EPA Drinking Water Office.* He cautioned that *George Ames* and *Peter Shanahan* have not given EFAB a charge, but in the context of their dialogue, there were a few areas identified as being ripe for consideration and review by the Board. He characterized it as a follow-up discussion with the Office to Water to see if EFAB might provide more focus on pertinent topics that may be at hand, and see what value-added the Board may be able to offer.

James Gebhardt mentioned that the SRF work group at the EFAB August meeting developed a list of follow-on projects from the work that they were then doing, and identified eight possible priorities. He submitted this list to *George Ames* and *Peter Shanahan* in advance of his conversation with them. In the subsequent conversation, they identified a couple of items on the list that might be of interest to them, in terms of an EFAB charge. The Office of Groundwater and Drinking Water also identified a few additional items that they wanted the Board to take a look at and on which they wanted it to provide some feedback.

One of the items of interest to the Office of Wastewater Management on the list of eight was the idea that EFAB might look at finding ways to provide SRFs with cross-border opportunities to partner more effectively with neighboring states, and thus assume a wider footprint with respect to watershed issues that are beyond the scope of any one political jurisdiction. SRFs are currently mandated to dealing specifically with state jurisdictions. The second item of interest for them was the idea that SRFs could add a lot more value to their specific programs if they found ways to tap into the SRF guarantee authority that resides within the federal statutes. *James Gebhardt* added that most state statutes pick up their language on this issue from the federal statutes.

James Gebhardt identified three areas of interest from an e-mail from *Peter Shanahan* to him: water pricing, the SRF subsidies and how they might be used to develop better asset management and utility practices, and some questions about influencing the broader marketplace, typically with respect to utility practices. The last of these concerned asset management and the question of enterprise risk management. He then read some excerpts verbatim from the e-mail. With respect to water pricing, *Peter Shanahan* is looking at issues in relation to the de-coupling of volume and charges. Here, he teased out an issue related to water having been historically priced as a commodity. And he identified issues related to this issue of de-coupling; i.e., with the pricing of water as a commodity and then all of the issues that utilities are facing with respect to sustaining their operations and upkeep. In conjunction with this, what about what the utilities perceive across the landscape as a diminution of water demand by customers. There was expressed interest in issues related to what the pricing paradigm is with respect to water utilities now, and what the pricing paradigm ought to be. Also mentioned was identifying the energy utility pricing model as perhaps something that ought to be investigated, with the idea that water utilities might consider something that is more sustainable, somewhat along the lines of how energy utilities structure their rate-setting.

With respect to subsidies, there was a question about whether or not the federal government should be more pro-active with respect to how SRF financial assistance is delivered within the state program, with the idea that SRF assistance can be used to perhaps encourage better asset management practices within the local government communities that make use of the SRFs. This presents all kinds of issues. *James Gebhardt* expressed his views on that subject broadly with respect to SRFs; namely, that, to the extent the federal government and other stakeholders load the SRFs up with their laundry lists of items that they'd like to see – items that beneficiaries of the SRFs utilize or pay heed to – you start to diminish the value of these funds because they then become more trouble than their worth.

The third item was the idea of influencing the broader market; i.e., how EPA could engage stakeholders to create incentives in the debt markets for utilities to change their business practices. *James Gebhardt* said this would require that some given practices such as asset management, full-cost pricing, and sustainability be made conditions for receiving certain rating outcomes or receiving some kind of guarantee. A lot of work had already been done in this area, and that if one looked at credit rating agency criteria, one would find that there is a focus on some of these underlying corporate management strategy issues. EFAB could certainly tease them out and report back to EPA on the general level of knowledge there.

With regard to *Peter Shanahan's* expressed interest in enterprise risk management, *Gebhardt* thought this is also an area of emerging knowledge. He did not know whether the credit rating agencies' financial analysts are paying more attention to this subject as an area that will either detract from the value of enterprises, or add to their value, depending on how the managers of those enterprises take on the enterprise risk management issue.

Potentially, five issues were identified. In terms of looking at SRFs, one of the fundamental challenges faced by EFAB is that SRFs are a federal program; one that in absolute terms is well-kept and suitably capitalized. But the fundamental driver(s) that make the SRF model work is that it represents a truly a federalist approach, in that the federal government has designed the program to address national issues, and accomplish national goals for the water and sewer space, but has delegated broad authority to the states to undertake how they go about dealing with and delivering on the related goals and mandates at the state level. And so it is a balancing act as to what you might add to the federal statute that would drive activity at the state and local level. Also, what amount of calibration is too much? In this context, *James Gebhardt* said that the Board is looking for subject areas that can speak to that broader issue and which perhaps can deliver the broadest value to stakeholders that operate these programs at the state level.

He summarized the five issues:

1. Water pricing
2. Utilization of subsidy-subscripted ways to induce certain kinds of management behavior
3. Influencing the broader market; or what is going on the broader market that induces better utility practices
4. Expanding state authority for cross-border investing of the SRFs
5. financial guarantee assistance and what the financial architecture is out there today and what could be said about this that might induce states to be more active in that part of the SRF space.

Questions:

Rachel Deming asked what kinds of assets and what kind of enterprise risk management James Gebhardt was talking about. *James Gebhardt* replied that in terms of the conversations he had with *George Ames* and *Peter Shanahan*, there were no specific mentioned. But he mentioned that in the SRF footprint, there are some policy objectives that EPA has set; these revolve around the whole concept of sustainability. The ultimate end-game is that the SRF has been in the funding phase for a very, very long time and initially was funded for a certain number of years. The idea was that it would ultimately be self-sustaining and that the federal government would be out of the business of funding it. That time period has been extended and for good reasons, because of the need out there, vetted by various consulting firms in conjunction with work by EPA. So at the state level, it is quite apparent that we are at risk of losing the infrastructure battle with respect to maintaining the state-of-the-art in the water and sewer space and dealing with the new growth. Where EPA has been looking to perhaps get a little more traction in this area of funding versus cost is to focus on asset management and full-cost pricing, among other things. But the notion of asset management is really along the lines of being fully conversant with how you manage a utility in the public space and how you manage it for effective cost management and effective long-term considerations, so that you are not "chasing your tail." It is a maintenance curve proposition. You want to manage low on the maintenance curve and not let things get ahead of you, where the cost profiles are escalating, particularly when you need to start replacing your facilities.

Rachel Deming asked whether the ultimate goal of these questions and exercises was to get to the point at which federal assistance was no longer needed, and yet at the same time, keep utility systems fully functional. *James Gebhardt* said yes.

Michael Shapiro said that this is the full-price costing model of which the asset management part is critical. There is a concept of sustainable infrastructure in the Office of Water. During the conversations the term "asset management" could have a couple of different meanings. However, in the case of managing a water-wastewater utility, it is managing your physical assets in the way that has the best long-term return for the utility, in terms of minimizing cost and replacing pipe when it needs to be replaced. This, in contrast to when someone arbitrarily says you ought to replace it. So it is really a systematic, business-like approach to managing your physical assets. The umbrella term "asset management" is freely used, but it really does not deal with the financial assets; just the physical assets.

James Gebhardt said that it is really a matter of knowing your infrastructure better. With the information systems that are emerging and the information technology that allows you to run statistics on "almost anything," there are certainly opportunities. The larger utility systems are "getting their arms around it," but the real issue out there is in the smaller communities, which are constantly underfunded. How do you deal with these utilities and get their managerial and technical capacities up so they can become more self-sustaining?

Scott Haskins said that he thought that there definitely are some entities---using Cincinnati as an example----that are approaching this ideal with regard to risk management and on the enterprise side. The Cincinnati utility has built risk management into its financial policies. The governing body of the utility has basically adopted risk management policies, and there is now an annual reporting requirement, under which they report what their leading risks are, and what their leading risk mitigation strategies are. Sometimes bond rating agencies do not put this in writing. The utilities provide verbal feedback, but nevertheless they have gotten bond rating increases and maintained bond ratings even in these tough times. And this is partly because of asset management plans that are looking at life-cycle, triple-bottom-line, community types of benefits, as well as having risk management plans. He rhetorically asked what kinds of criteria can be applied and accepted by states for having legitimate management programs, because it is sometimes difficult to get specific. Trying to help move the industry toward having sustainable-type practices and documenting those and having asset management plans.

John Boland said that he was puzzled by the reading from the e-mail from *Peter Shanahan* about the idea of de-coupling water rates from quantity and of pricing water as a commodity. First, water *is* a commodity, which is why it is priced as a commodity, and second, if by de-coupling is meant not using volume pricing, there is already a lot of experience with that, citing Chicago, and more recently New York City, and in plenty of smaller communities. This is being done all around the country, and the result of doing this is known exactly. The result is inefficient water use, deteriorated plumbing facilities, and massive inequity between groups of users. The idea that de-coupling water rates from quantity and pricing water as a commodity will somehow be the answer for meeting the future financial needs of the water utilities is not the answer. The answer is full-cost pricing.

Michael Shapiro said that he thought the point the people in the Office of Water were trying to make is that part of the mantra of asset management sustainability is conservation. If you are trying to cover your capital costs, and you assume that you have a certain volume that you are supplying and you exceed your conservation goals, and if the quantity you provide does not generate enough revenue to cover your capital costs, you are challenged to support conservation as a goal. The question is, how do you maintain full-cost pricing? You do not offer discounts for larger volume, which is part of what the people in the Office of Water were talking about when they talked about commodity pricing. Paying less for large volumes of water and more for very small volume use is still built into the rate structures of some utilities. These are the kinds of issues *George Ames* and *Peter Shanahan* were getting at, not truly de-coupling pricing from quantity.

John Boland responded that if this means that you should not have block-type rates—that is the relationship between volume and pricing---he was completely in support of that. Lock-type rates were a bad idea. *James Gebhardt* said that he thought that *Peter Shanahan* really did acknowledge the apparent conflict between the value in getting resources to be used and consumed in a more responsible manner; that is, consuming what you need and not encouraging over-consumption; and also, that the success of conservation being that your revenue stream is in some kind of free fall and you can not cover your costs, this causes you, then, to raise your prices.

Mathilde McLean asked whether you could have a base charge which would spread the costs and then a volume charge above the base charge. But secondly, what if you charged more in the summer time when people are watering their lawns and you know that they are using more water; in order to get them to have more water-efficient lawns? *James Gebhardt* replied that this is commonly done in warmer climates.

Rachel Deming brought up the subject of trying to leverage SRFs to improve asset management. A lot of the work she is currently doing as part of a legal clinic is trying to develop process covenants, and to some extent, to tie into metrics that other people are trying to develop, to condition certain types of loans in the area of social impact investment. It is extraordinarily difficult to articulate in writing what those things are. Then when you try to tie it to a loan agreement, to which *James Gebhardt* alluded, you can make it so complicated that people back away from the utilization of that underlying instrument. One matter the board members should think about in relation to asset management goes back to EFAB's "leaky pipes" report. In terms of training programs, it would be useful to think about doing something on the federal-to-state level rather than the state-to-the-individual municipality level; that is, trying to make it all more centralized rather than putting the onus on the individual users through a condition or some type of process covenant conditions on lending.

Heather Himmelberger said that based on her current work experiences, she would demand that everybody do asset management for everything. The New Mexico Tech EFC works with utilities with anything from 53 connections all the way up to a couple of hundred thousand connections, and there is no reason they cannot do asset management, even with varying levels of utility sophistication. Utilities should do asset management because it is the right thing for them to do, not because they are mandated to do it. New Mexico's program includes incentives to do asset management and that it had 47 people show up for an asset management training module. If you put it out there, people will do it, and every funding source ought to include asset management in some way, whether as an incentive, or a mandate. *Rachel Deming* agreed that it should be done, but that figuring out the correct mechanisms, in terms of how to provide it and about the level at which you provide the mechanisms, is the hard part.

Keith Hinds reminded everyone that EFAB has gone over this issue exhaustively and issued a very good report – the EMS report – that had a lot of input from the American Water Works Association (AWA) and the communities. He then brought up the subject of loan guarantees, because he didn't think this was being done at all. *James Gebhardt* said that loan guarantees were being done, but piecemeal. There are two or three financial architecture paradigms that he could think of that were usable for this.

In response to a question from *Keith Hinds* as to whether he could see loan guarantees happening at the state level, *James Gebhardt* replied that he thought it would be easier for states to undertake than they realize, but that the road map needed to be "put out there." For example, when the SRFs got started, they used "starter-kit" financial architecture. You created an indenture. If you had a reserve fund model--these are the leveraging programs – you would covenant that your reserves would be *x* percent of your loans outstanding, and you would use that to build a security structure that would allow you to tap into the market at the least cost. You could do loan guarantees by moving market-rate financing into those indentures. However, you would need to move the reserve covenants out or diminish them substantially, such that you could actually bring people in and finance them to the bond market to capture the value of the SRF rating, without actually tapping into lesser resources to do it. This could be an iteration of a loan guarantee. Beyond that, you could look at the substantial floats that are building up that basically serve as a loss reserve or a guarantee. And then you would have to master the concept of dollars being able to do more than one thing at the same time. In this context, you do not need to have the New York State SRF funding model in its current iteration to capture the value of guarantees for your clients.

Referring back to public-private partnerships, *Mary Francoeur*, said that although she does not see such partnerships as panaceas for a lot of things, there is one area in which they can be useful. That is in T-bond contracts where you have got to design, build, operate, and maintain; where you have a private party that is typically obligated to do the life-cycle maintenance for a facility over a 15, 20, 25, or 30-year period. When the EFAB did its public-private partnerships (PPP) report a couple of years ago, most of the focus of that was on the financing side of things, and getting private activity bond allocation for water and wastewater PPP projects. One of the things that the Board might want to reconsider is going back and looking at some of the research that was done on public-private partnerships, and put this in the context of a management tool for life cycle maintenance. In the way the contracts have been structured in the United States and elsewhere, the building-in of the life cycle maintenance associated with them has been an important element of why they have been successful in certain instances. For the life-cycle maintenance of new facilities, it has been a good way to approach it.

Andrew Sawyers said that he thought that, for the most part, a lot of the states would like to do such guarantees. However, the real concern was that the borrowers for the most part are not interested in going to the market, unless they are large. Small borrowers would rather get a grant or a low-interest loan; they do not want to go through a loan guarantee program. Concerning prescriptive subsidies--this was brought up either by *Peter Shanahan* or *George Ames* in the e-mail from which *James Gebhardt* read – states would like to make those decisions themselves, even though right now these come from the Agency.

James Gebhardt said, regarding the areas of concern brought up in the list developed from the e-mail, EFAB needs to bring that scope and definition to bear on the water and wastewater utility issues, and it needs to identify a specific idea for a charge with which it could approach EPA. The recording of the minutes of this meeting could be used as the basis for a follow-up conversation for members of EFAB to participate in such a discussion with the Office of Water.

Sustainable Funding for Tribal Environmental Programs

DFO Michael Shapiro introduced *Chris Hoff, Deputy Director,* and *Luke Jones, Senior Policy Advisor,* with EPA's American Indian Environmental Office (AIEO).

Chris Hoff introduced himself and said that the legal position of tribes is very different from the federal government's relationship to states or local governments. What has evolved over time is a direct government-to-government relationship through treaties and Congressional statutes and Supreme Court opinions that ensure that the federal government has direct responsibility to operate and make decisions that are in the best interests of tribes and tribal sovereignty. There are two legal entities that have jurisdiction to provide environmental protection on Indian lands within their borders: the tribes themselves and the federal government. The federal government has a number of tools available to use to further environmental protection in tribal areas, the most significant of which is the Indian general assistance program (GAP). This is the largest single dedicated block of funding that most tribes receive, which is administered by the AIEO. The GAP disburses approximately $65 million a year to tribes across the nation for the purpose of assisting them in developing the capacity to implement environmental programs. If the tribes are unable to implement an environmental program, then it is the federal government's responsibility to do so, using GAP funds. The GAP has been a very effective tool, but with some significant limitations, and these would be the primary topic in this discussion. The amount of money that is available in the program is certainly not enough to allow every tribe in the nation to fully develop capacity for all of the environmental programs needed. The intention of the program from its start was to develop capacity for a tribe that would allow the tribe to begin implementing that program, thus allowing those capacity-building funds to transition to another tribe ready to take on the responsibility of environmental program-building. However, tribes have lagged substantially behind state governments in the amount of infrastructure funding they have received from the federal government and have vastly inferior ability to raise money themselves for a variety of reasons; including, in many cases, the absence of an effective tax base, or in many cases, simply the socio-economic conditions of the tribes that makes it infeasible to have user charges or taxes to actually support infrastructure development. So the challenge is that the AIEO program has been very effective at building capacity, but it has been very difficult for tribes to then continue the operation of the program with their own funding streams, because typically those funding streams simply do not exist. This works to the disadvantage of both the tribes and the EPA. For the tribes, it makes it extremely difficult for them to move away from being limited by the amount of federal dollars that are available and to begin moving ahead with their own environmental programs. And it is a challenge for the Agency because it is not able to be as effective as it would like in spreading funding among tribes across the nation. It also becomes more difficult to achieve the environmental outcomes that the Agency would like to see from a fully-developed, sustainably-funded program. The AIEO endorses the charge and the proposal brought to them by EFAB. He then introduced his colleague, Luke Jones.

Luke Jones said that AIEO was interested in engaging in dialogue with the Board if there are refinements to the charge that can be suggested by the members. Discussing the charge itself, he said that the initial idea brought to his office was sustainable funding for what he characterized as the drinking water/wastewater infrastructure in Indian country. He said AIEO took a stab at making a slight revision to the charge to focus more on EPA's regulatory programs and whether or not the tribes could sustain financing to operate these programs to ensure compliance. The nature of the revision his office eventually made to the charge concerned the responsibilities of EPA vis-à-vis other federal agencies that share in the responsibility to provide investments on the ground for infrastructure development, drinking water infrastructure, wastewater treatment facilities, and other infrastructure in Indian country.

Discussion

Debi Livesay, Chair of the Tribal Work Group, said that the work group looked at the scope of the charge and came to the conclusion that it might be a bit too narrow and had proposed some changes. She described the suggested changes as "turning the charge around" a bit, and were made in light of the fact that since AIEO wants to have sustainable environmental financing, there has got to be some kind of type of socio-economic base that goes along with this. The work group was suggesting that the following questions be added to the three existing ones at the end of the charge:

1. What are the socio-economic and governance barriers to developing an economic base that both requires and supports a broad regulating program?
2. What are the environmental impacts from the various economic activities, and how does this play into the EPA regulatory programs?
3. What case studies on tribal economic regulatory situations provide examples of the continuum?
4. What tribal capacity economic activity supports regulatory amendments, or moving along the continuum?
5. How can barriers be reduced or eliminated; i.e., what if GAP funding could do something more than it already does in the program?
6. In what ways can tribes build on federally-funded programs and capacity-building and establish a sustainably funded environmental program?

Keith Hinds said the suggested changes should not be accepted as gospel; that they might well be changed following a fuller discussion by the entire Board.

Luke Jones said that the suggested changes to the charge sounded right, but that there were concerns about the much larger work load for his office that they imply. He described his suggestion that the modifications would make the charge too wide as "a reality check." Second, he said that the AIEO welcomes the recommendation for identifying and removing barriers; for example, expanding the authorities that constrain its use of GAP resources. But he suggested that a balance has to be achieved between being too constrained in using these funds, and having so much flexibility in funding programs that one loses the intended measureable results of that investment.

He said further that the work group should be aware that Congress has provided some tools to the Agency to encourage better performance from his office's limited investments. One of these, and one with which his office has had some success, is the Performance Partnership Grant Authority (PPGA). Many state governments that receive PPGA dollars consolidate funding under a performance partnership agreement between the Agency and the state, and then award funds through performance partnership grants. There are now regulations in place that allow AIEO to consolidate funding in a similar way for tribal governments and award Agency funding to tribes through performance partnership grants. He described this as a potentially powerful authority to create flexibility for tribal governments to use EPA investments in ways that will help them build and implement programs; although one that his office has not fully implemented. A number of his office's funding authorities do support certain types of environmental program implementation, and that it can consolidate funding and award those funds as a public partnership grant rather than as separate grants. Also, referring to the third-to-the-last new question for the charge, another issue that the work group would encounter would be identifying those tribes that can develop sustainable regulatory programs. He added, that the issue of jurisdiction is going to be significant as well--tribes that are clearly able to indicate jurisdiction, versus tribes that have a more challenging path in the area of jurisdiction.

Chris Hoff said that he thought that one other thing to keep in mind is that, to the extent that anyone considers changing or considers advocating a legislative proposal to revise or amend the scope of the GAP program, there are always pluses and minuses. If the GAP program is allowed to begin to fund certain other things--does that, for example, tend to remove some of the pressure on other governmental or non-governmental entities to appropriately fund those very same things? He reiterated that there really is not enough money in the GAP program to fully fund every tribe's capacity-building at a level that all would agree is really truly sufficient. He suggested that expanding the scope of GAP would, if anything, create even more tension in this regard.

Questions:

Chiara Trabucchi, said the additional questions for the charge suggested by the work group may sound broad, but that to make informed recommendations from an economic and financing perspective, the group needs to understand the data that is out there; and that the group was thinking that the best way to do this is to start with an economic base, think about the attendant environmental impacts, think about the regulatory programs that already exist, address those impacts, and then ask the question, how can you leverage the financing capabilities you have to fund those programs and to foster self-implementation over an extended period of time? The work group, through these suggested additions, is attempting to understand the breadth of the economic activity base in tribal lands that lends itself to environmental impact; and then, in the context of this environmental impact, ask what the existing regulatory programs are either within EPA or its governance. Then the group actually could say, here are some elements of these regulatory programs where you have lessons learned, and you could extend that to some of these tribal situations. The best way to do that was through case studies and lessons learned precisely for the reason that *Luke Jones* just said--because there is a breadth of information out there. At some level it is an iterative loop. If you do it correctly from the get-go, then you are creating and mentoring an environment in which you can actually take the funding and move it elsewhere.

Jennifer Hernandez talked about two entities from her own experience – the Presidio in San Francisco, and California counties, which have huge ranges in size and capacities – as analogues for the tribes in the context of the charge. She used these to suggest that maybe the capacity-building exercise could be parsed a bit to avoid trying to be everything for all programs for all tribes all the time. She provided the example of monitoring the compliance assistance assessment. These seem like base activities that are important no matter where you are as long as you have the underlying regulatory activity taking place in your jurisdiction. These base activities for programs seem, to the work group, much easier to get their hands around than, for example, the development of permitting and a full roster of enforcement capabilities, which are hard to do, even at the state level. She also suggested that the work group might want to parse the program's question scope a little bit more, and thus also avoid the difficult question of Indian law question. She suggested that the group being a little more pragmatic about what it is taking on and really getting the base capacity funded on a sustainable basis may be an option to think about for some tribes at some times.

William Cobb said he thought that everyone was saying the same thing: tying economic activities to programs. There was talk in the work group about a continuum, with EPA administering all tribal environment efforts at one end, and if you want to include the Navajos which have a very broad and robust environmental program, having them at the other end. There are a number of stopping points along the continuum, including just the basics that *Jennifer Hernandez* alluded to – some very simple monitoring activities – all the way up to issuing permits and doing compliance, enforcement, etc. The question is, what motivates a tribe to move step by step along the continuum? This is what the additional questions for the charge were constructed to do: recognize that there is a very minimum threshold activity and that GAP can get you part of the way there, or all the way there. But to take bigger steps, you have to ask the fundamental question, why, and the "why" is going to have to be tied back to whether or not there is an economic activity going on that provides the need for the program. It is all about how to collect the information in case studies, etc. to provide some examples, both positive and negative. The case studies include examinations of environmental activities of which the researchers were unable to make any sense. Such studies would be equally instructive.

Sara Pesek suggested that the work group was really looking at a variety of characteristics other than size that would place communities on the continuum. She does not think that expanding the number of questions would make the charge more complicated. The work group felt that it had to add these questions to actually present a more robust picture so that it could answer some questions and be more useful.

Heather Himmelberger referred to a statement by *Luke Jones*, to the effect that it would be great if all the tribal communities had the capacity to take ownership of all the environmental monitoring on their lands. In EPA Region 6, the EFC had a few requests from the smaller tribes to take on more program roles, and that there had been a lot of concern about their capabilities to do this; that it might create more problems than it might solve. She also noted that there does not seem to be a big push on the part of EPA Region 6 (or in Region 8 for that matter) to really push the tribes in that direction. In contrast, *Sarah Diefendorf* said that within EPA Region 9, the EFC sees a strong push on the part of tribes for more sovereignty and for more ability to take over their own services. She has seen this both from her colleagues within the Region and also the many tribes that her EFC works with.

Michael Shapiro assured *Chris Hoff* and *Luke Jones* that anything the Board came up with the following day would go back to their office for final review. Hopefully an agreement could be reached quickly after this meeting and the work group could continue.

Luke Jones suggested one approach that he thought might be helpful, based on his work in Region 5 implementing a provision of the Agency's 1994 action memorandum on tribal operations. What was done was to sit down with each tribe and have a consultative conversation, going through each of the steps about what the current lay of the land was, what the pertinent regulation was, etc. and begin to talk about mutual roles and responsibilities for program implementation. Where tribes demonstrated a real interest to build capacity to take on a greater role in administering the program, he and his colleagues were able to map out a capacity-building strategy around that interest. Where tribes were not interested, they had a clearer understanding of what the long-term federal workload would be. The tribal environmental effort would be well served by having a reservation-specific program development and implementation strategy in place. There were some challenges, but getting to that place in Region 5 really empowered the Agency to understand what the capacity development needs were, and what the workload would be, and align its limited resources to priority program implementation needs that were documented and well-understood.

Chris Hoff suggested that it would be useful to ask the question, to what extent are some tribes not so interested in taking responsibility for environmental program implementation precisely because they do not see a path to be able to continue the work that they have begun.

EPA Budget Priorities

Michael Shapiro introduced *Barbara Bennett, EPA's Chief Financial Officer*. She addressed the board members about current Agency budget priorities and provided an update about appropriations for the rest of the current fiscal year and for FY 2012.

Barbara Bennett thanked the board members for their work and thanked DFO Shapiro and Mr. Abelow. She discussed the proposed budget for 2012, and said that the Agency is proposing the following investments for the upcoming fiscal year: $85 million for state and tribal activities; $27 million for regaining ground in inspections and $16 million for chemical safety and assessment. For the current fiscal year, she noted that the Agency is halfway through but still does not have a final appropriation because of the divisions on the federal budget in both houses of Congress. The Agency is proposing just under $9 billion for FY 2011. Although she said that the 2011 appropriation was a continuously moving target, she discussed the current continuing resolution and the possible financial effects of its proposals on EPA. In connection with this resolution, she described some 20 amendments in the House bill that she described as troubling for the Agency. She also noted that the Senate has, to date, filed a $9.9 billion budget for EPA for 2011. She stressed the importance of having funds for the Agency's core mission and said that she would take questions.

Questions:

James Gebhardt asked how things appeared in the current budget deliberations for the 2012 budget for SRFs. Barbara Bennett replied that the figure was a little over $2.5 billion.

After fielding a few additional questions, Barbara Bennett honored departing members of the Board with her thanks and a plaque honoring their services. These went to John Boland, Justin Wilson, Jennifer Hernandez, Rachel Deming, Mary Francoeur, Andrew Sawyers. Also receiving thanks and a plaque but not present were Cherie Rice, Don Correll, and Greg Swartz.

Michael Shapiro thanked Barbara Bennett for her appearance.

Public Comment and Adjournment

Michael Shapiro called for comments. There being none, he adjourned the meeting.

Day 2 - Tuesday, March 9, 2011 (9:00 a.m. - 4:00 p.m.).

Presentations/9 a.m. to 10:45 a.m.

Opening Remarks

Michael Shapiro called the meeting to order and announced a change in the agenda. The report out by the Sustainable Communities Work Group, originally scheduled for 11:00 a.m., was being moved to the 2:30 p.m. slot. The report out by the VEIB/PACE Work Group had been moved to 11:00 a.m. The August EFAB meeting is scheduled for August 15-16 to be held, tentatively, in Chicago. He then introduced *Brandon Belford, Finance Specialist* with *Department of Energy's (DOE), Office of Energy Efficiency and Renewable Energy*.

Financing Environmental Technology

Brandon Belford's discussion would cover three topics: current DOE activities in the commercialization and financing of energy efficiency across various sectors, an update on some of the more recent announcements by President Obama on this subject, and the boiler MACT rule. DOE has been partnering with EPA in the development of this rule.

He joined the Obama administration about a year and a half ago, primarily to be part of the Recovery Act team. In the context of the Recovery Act, his specific role was working with state and local governments on energy efficiency projects. More recently, he has been working with other DOE offices and with other federal agencies to promote residential and commercial energy efficiency financing projects. He spends most of his time now on residential energy efficiency financing, as well as some on the commercialization of advanced biofuels.

He mentioned the large obstacles to increasing wider adoption of energy efficiency technologies, including the fact that such investments for both commercial and residential customers were typically recouped only over a 15 to 20 year period, which discourages many potential adopters. In the current financial environment of widespread de-leveraging, most of the financing for projects in commercial energy efficiency technologies is available only at very high rates. To help mitigate this problem, he and his colleagues have been working with state and local governments to try to offer affordable financing for end-use customers using Recovery Act funds, and more effectively communicating the value of the use of energy efficiency technologies to potential end-users. The latter includes making sure that DOE, state, and local agencies are providing a consistent message about the value of these technologies.

The Recovery Act has allowed him and his colleagues to invest up to $6 billion through the states for all types of energy efficiency and renewable energy programs. They have seen approximately $250 million in federal funding leverage an additional $1.5 billion dollars for energy efficiency programs. The majority of this money is being directed, initially, to the residential sector. This targeting helps to build political support for these programs, and has the advantage of potentially creating additional "green" jobs.

DOE has a team of 30-40 consultants designing energy efficiency financing programs, working with state and local government officials on program design implementation. Specific mechanisms include, for example, setting up state-level revolving loan funds. Focusing on the investor-lender aspect of energy efficiency financing, one of the biggest challenges is that there is limited quality data from the past 15-20 years that demonstrates that the installation of energy efficiency technologies leads to actual savings. There are about 20-25 related data sets that have been produced by the federal, and various state and (Canadian) provincial governments over the years, but a lot of this data has not been "scrubbed." DOE building science professionals have started extracting from these sets data that could be useful to the financial industry; that is providing statistical evidence of cost savings from energy efficiency investments; placing these scrubbed data sets in a central location where they can be accessible to the private sector; and allowing the incorporation of newer, more useful data from the Recovery Act programs. These DOE personnel are also "vetting" these sets directly to the financial industry. The longer-term goal is to achieve a more analytical and data-centric framework that will be useful for calculating the impact of private investment on the financial performance of an energy efficiency project and financing, thus encouraging private investors to lend.

He then discussed progress associated with the President's Better Buildings Initiative, launched in February. This is a component to the President's broader goal to achieve 20 percent energy savings by 2020 in commercial and industrial buildings including universities and hospitals. The initiative contains provisions to encourage the private sector to invest in energy efficiency technologies, and envisions billions in such investment over the next nine or ten years. The Initiative has five main components, as follows:

1. Streamlining the 179(d) tax deduction for projects that achieve certain levels of energy efficiency improvement; up to a deduction of $1.80 per square foot. And restructuring the tax incentive for the 2012 tax year.

Brandon Belford said that this tax incentive has not been as utilized to date as they had hoped, partly because the process for obtaining the deduction has not been streamlined. Also, the software to verify such savings is quite expensive. In response, DOE and a number of national laboratories are working to create a more streamlined software tool to verify the savings, as well as working with the IRS to streamline the paperwork that's involved to qualify for the deduction. In its 2012 budget, DOE has also proposed changing the deduction to a tax credit and is working on a legislative proposal to allow real estate investment trusts (REITs) to benefit from this tax deduction. *Brandon Belford* and his colleagues would welcome input from EFAB members on the most efficient way to structure this.

2. Related workforce training skills and certification efforts to help spur job creation.

3. The "Race to the Green" project, for which DOE has asked $100 million.

This program focuses on competitive solicitation for units of state and local government to come in with proposals with state- and local-government stakeholders on ways that some of the barriers to implementing energy efficiency measures inherent in building codes, and building-related policies and regulations, can be reduced.

4. The Better Buildings Challenge, which is still in development.

The idea here is to reach out to Fortune 500 CEOs (the president has recruited *Bill Clinton* and *Jeff Immelt*, the head of the president's new Council on Jobs and Competitiveness to help in this regard) to get a commitment from them to take steps beyond what they are doing now to improve the energy efficiency of their building stock, as well as take new actions. Participating companies could both leverage existing programs funded by DOE and make money available that is already on their balance sheets for investment in more energy-efficient projects.

5. Accelerating and increasing access to financing.

This effort will be a two-pronged approach: collecting data (building off the efforts under the Recovery Act) and continuing to provide technical assistance to encourage financing mechanisms such as revolving loan funds *and* tapping into some of the tools already authorized under existing federal legislation. This effort would build off the recent increase in SBA loan guarantee authority available under certain programs from $1 million to $5 million and encourage the implementation of energy efficiency by small business. This will be achieved by working with private lenders to break down existing barriers for the use of SBA funds for energy efficiency measures by borrowers, as well as "selling" to these lenders the idea that loans for energy efficiency programs are products that their small business customers will actually want. The effort to increase access to financing will look at certain FHA programs as well; with a view to, for example, reducing the financing costs for implementing energy efficiency projects by hospitals and other institutional users of FHA loan guarantees.

On the legislative side, there is a proposal to give the DOE the authority to set up a dedicated loan guarantee program---separate from two existing loan guarantee programs----specifically focused on supporting commercial building energy efficiency. (The challenge with the two existing programs is that they were set up to provide financing for large scale nuclear, transmission, and renewable energy projects.) If this program is successful it could be expanded through future appropriations. *Mr. Belford* and his colleagues were also working on how such a program could be structured.

Questions:

David Eberle had three thoughts relating to small-and medium-sized cities. He would love to see Department of Energy (DOE), work with Department of Housing and Urban Development (HUD), on sustainability grants, because one could achieve a whole net range of energy efficiencies through land form. This is very important; particularly as one designs the [inaudible] aspects of funding that would work really well. Second, he promoted the idea of creating institutes to train builders. The city of Boise took advantage of what is called a community investment district where it created planned unit developments (PUDs). But, the developer cannot find any builders that know what the energy efficiency products are and how to use them. Another thing that could be done is to raise funds through the municipal bond market.

Brandon Belford responded that when he and his colleagues look at capital sources for energy efficiency projects, one area they are working on is strengthening the relationship with Treasury Department Programs. There were a number of programs funded through the Recovery Act for tax credit bonds. He told *David Eberle* that for his particular needs in Boise there is the qualified energy conservation bond program which is a $3.2-billion program that was allocated to the states. It was initially a tax credit but it has since been changed to a tax grant similar to the Build America Bonds. But it has been a challenge to get lenders and municipalities comfortable with this bond instrument. Of the $3.2 billion, about $3004.0 million has actually been issued. There are also some challenges in getting formal guidance from the IRS, and it is unclear if work force development is an eligible activity, but green community programs which incorporate energy efficiency projects for commercial, residential, and public buildings are certainly eligible.

David Eberle added that if DOE could find a way to solicit directly with cities and metropolitan planning organizations (MPOs), and bypass the states, he and his colleagues would be very happy.

Jeff Hughes wondered if DOE is talking with the investor-owned utilities. There are a couple of issues here. One is the whole idea of energy savings. What he and his colleagues have been finding – the same as was found in the water sector – is that in terms of financial savings from installation of energy efficiency technologies, it is never a one-to-one saving. In some cases it is a really poor value proposition. There might be a one to 20 percent or 10 percent because of the fixed costs that are inherent in the industry. He asked if there is any talk of incentives and negotiating with the utilities because in worst-case scenarios, people are saying that the fixed costs are so high, and there's so little in the way of variable costs that obviously, if you are promising financial savings to pay back the loan, then the rates are going up two years later.

Brandon Belford said that a couple of DOE's grantees are working with, for example, Duke Energy, on a utility model. He said that obviously there are a handful of areas with various utility financing programs. Most of them are consumer loans, a handful are actually tariff-based. He then mentioned a longer-term program that his colleague, *Gil*

Sperling is working on. This involves working with the utilities as well as the public utility commissions, (PUCs) and the banks for a lot of these programs. The approach that *Gil Sperling* will be taking over the next few months is getting out in the field and conversing with the PUCs and the (PSCs), etc. to figure out, effectively, a utility energy efficiency-type of model that can either be rate-based or that could be structured in such a way that it has an easy way to allow private capital from large financial institutions (i.e. G.E., PNC, Bank of America or from a city to flow into the model. There is a lot of work to be done to align the right incentives between the utility, the PUC, the PSC, the rate payer, and consumer advocate groups. Ultimately, we are talking about a market of hundreds of billions of dollars. It is not always going to come from community development financial institutions (CDFIs), credit unions, or even the super-regional and even the national banks. There needs to be a role for the utilities.

Sarah Pesek made two points. First, being committed to 20 percent energy savings is fantastic, but that it is important to think about more than just the energy component, and especially, in circumstances in which one is doing a retrofit, to focus the overall effort, in terms of what needs to be done to have the most effective overall environmental benefit. In this vein, in terms of retrofits, she would encourage the formation of as many partnerships as possible that think beyond the energy issues per se. She also mentioned the number of programs, at least in New York State, that have surfaced in community colleges and that they are doing really fantastic workforce training. She suggested that such programs at community colleges around the country were something that DOE could really leverage. *Brandon Belford* replied that DOE was definitely in touch with these green jobs initiatives in New York and other states, they are one of DOE's biggest stakeholders. With regard to *Sarah Pesek's* first point, he said that as part of the Better Buildings Initiative, DOE was also trying to line up allies; those other stakeholders that could be resources for the effort along with facilities managers to make sure that opportunities related to building retrofits are being maximized.

Sharon Dixon Peay asked if DOE was doing work in the area of helping companies that will be regulated by the new rule for commercial boilers. She asked if *Brandon Belford* could give the meeting attendees a sense of how much the current budget discussions would affect all of the initiatives that he had been talking about. In response to her first question, about financing retrofits or technology upgrades of commercial boilers, *Brandon Belford* conjectured as to the response of the G.E. Capitals, the Deutsche Banks, the pension funds, etc. of the world, that they may have as recently as last autumn said, "that is interesting, but that is really not on our radar screen." But there have been a lot of very productive conversations in the last month or so in which financial institutions are getting more comfortable with the structure of such financing. The sentiment from these institutions that he said that he was receiving lately was that there might be large amounts of money in place for these companies to actually offer products. He said that hopefully DOE could provide the final nudge that will get capital to flow into these projects. With regard to DOE funding, he said that he thought that for the current fiscal year, there would be some type of continuing resolution. There is still a lot of discussion on the 2012 budget that the president released last month, but it is too early to tell. DOE has asked for more than 3 billion dollars for energy efficiency and renewable energy (through the Office of

EERE); some in the House of Representatives have recently suggested reducing the proposed amount by more than half. He said that DOE was cautiously optimistic that it will get the bulk of what it wants.

On the issue of financing retrofits and technology upgrades for commercial boilers, *Sharon Dixon Peay* asked whether DOE actually already has some sense of what financing mechanism might actually work. *Brandon Belford* replied that DOE was further down the road with respect to being able to have an initial conversation with affected entities and actually looking at what their options are and what the cost of those options would be. He said that he thought there was still work to be done on making the connection between an opportunity, and what financing tool or approach would be most appropriate. What is playing out he said, in terms of our Recovery Act investments, will have an influence. He said that some DOE people were working on state and local government-supported programs. It is TBD he said.

Karen Massey asked how the most recent House budget bill treats the DOE initiatives that were just described and whether they still were in a viable form. She also asked how the weatherization and SEP programs were faring in these budget discussions. With regard to the Better Buildings Initiatives, *Brandon Belford* said he thought it was still too early to say where the House and the Senate are on some of these issues. However, he said he thought that these programs make sense regardless of one's political perspective. He said that DOE's goal, particularly for the State Energy Program (SEP), is that I think we have learned a lot of good things about weatherization and the State Energy Program (SEP). Recognizing that we are not going to have $3.1 billion for the SEP, he said that it is a matter of trying to figure out what the best mix is of having a formula and competitive component. He also said, however, that based on final appropriations if it is possible to provide a bigger chunk for a competitive program then the focus is on getting funding out to those states and those programs that really are developing public-private partnerships that are getting really high leverage rates.

From the perspective of the financing community, *Thomas Liu* said he thought that loan guarantees, SBA loans, the loan guarantee program for DOE were great ideas, but that these seem like an indirect way to fund these projects. With the 20 percent by 2020 goal, he said he thought that quick action was essential. What he encouraged DOE to do is really look at the Build America bond program. He said it had been a very successful program. It provides direct financing subsidies to projects, enabling the financial community to get projects off the ground. Like *David Eberle* in Boise, if you do not have access to the capital market, the Build America bonds program addresses that area of access, because there is a lot of demand for this product. He expressed surprise that on Capitol Hill there was now a proposal to reauthorize Build America bonds; and this for a program that the financing community thought was dead. He said that the Build America bond product should be a priority for the administration, because the investors still know about it. He cautioned however, that ARRA and Build America bond programs, though very successful, were full of administrative hassles and there were always fears of IRS audits. He said there was concern about these useful, well-working programs being caught up in bureaucracy because some federal agencies had not established all the rules and regulations at the start of the program. Establishing these rules and regulation upfront will make it easier for the target audiences of these programs.

In this vein, *Ann Grodnik* said that, in terms of communities being unable to take advantage of the QECB program, one of the problems she has run into, beyond the question of possible IRS audits, is the fact that the allocations were so fragmented that by the time they got down to the community level, there was too little money left to really do anything with. She said that if there were some action taken to re-allocate that remaining authority, she would encourage DOE to consider larger chunks being made available, potentially through a competitive or some other process so that communities can actually use them and issue bonds effectively and efficiently. Regarding the Better Buildings Challenge, she said she was curious as to what DOE's goal was; what were they trying to achieve? Is it upgrades and retrofits on marquee buildings throughout the country? Or deeper penetrations, within the commercial markets? *Brandon Belford* replied that he thought it was a little of both.

Andrew Sawyers said he was curious about the role of energy services companies (ESCOs) in all that *Brandon Belford* had discussed, and specifically, the loan guarantee program. He asked if there was any talk about re-tooling the loan guarantee program so that the program can start supporting the ESCOs. *Brandon Belford* replied that he thought that that was definitely part of the plan. While DOE wanted to be cautious---not particularly advocate one business group or entity over another, in terms of designing its program---obviously the ESCO model had been very successful. If one looked at what was in the president's 2012 budget, as well as what was in the Better Buildings announcements as well as some of the white papers circulating that discuss how DOE is structuring the program, a lot of those components mirror the insights and feedback that the department has gotten back from the ESCOs.

Bradley Abelow said that certification of new energy efficiency technologies is an important issue. He noted that certification programs tend to compare existing technologies and efficiency gains of existing technologies, and the hurdles in the marketplace for overcoming the replacement of products and technologies that have been on the market for 50 years or more with products and technologies that can achieve the same efficiencies with better technology and less cost are huge. So even where some of the financing issues can be got around, one runs into the certification roadblock; that is, there may not be SEER or other certification for more advanced, more efficient technologies. So, thinking about what the non-financial barriers are, he said it is particularly important for EPA and DOE to work together on this problem. *Bradley Abelow* also said that, given the presentation by *Brandon Belford* and the interest on the part of EFAB members in cross-agency collaboration, DOE should consider sending representatives to listen in on EFAB meetings in the future

Michael Shapiro thanked *Brandon Belford* for his contribution.

Infrastructure Financing for Transit-Oriented Development

Michael Shapiro introduced a team from the EPA Office of Policy who was to give a presentation on EPA's sustainable communities program. These were *Bicky Corman, Deputy Associate Director; John Frece, Director of the Office of Sustainable Communities; Lee Sobel, Real Estate Development and Finance Specialist at the Policy Office,* and *Melissa Kramer, Policy Advisor***.**

John Frece provided an introduction. The Office of Sustainable Communities was organized into its present structure in October 2010, and it is particularly interested in the environmental and public health effects of the built environment. He described the office as a non-regulatory, small unit that looks at what the effects of the built environment are and tries to come up with ways to help communities build in a smarter way so that they have fewer adverse environmental and health effects from development. *John Frece* said that the office is providing more and more in the way of technical assistance (TA)----these days, it accounts for about half of its budget----trying to reach as many communities as it can. Communities around the country are at a tipping point, according to him; there is great demand for the type of approaches provided by the TA that his office provides. It has a menu of approaches, but he said that for about the last five or six years, it has been focused on doing one particular type of TA; the Smart Growth Implementation Assistance (SGIA) program. The office performs about four or five SGIA projects a year. The goal of these projects is to identify some cutting-edge issues for which the office does not already have an answer. The "hidden agenda" is to find workable approaches and measures that can be applied in other communities.

He said the subject of the day's presentation would be focused on a particular SGIA, called the Partnership for Sustainable Communities. He said that his office was working in close collaboration with HUD and DOT as part of this SGIA. Thus, whereas the office used to review applications for assistance from communities unilaterally, it now does so jointly with these two other agencies, as well as with regional staff. Out of 35 applications for assistance that were submitted recently, four were eventually chosen for funding for this SGIA. All four of these focused generally on the same question: how does one finance the infrastructure necessary to do smart growth development?

He said that his colleague, *Melissa Kramer,* had come up with the idea of merging the applications from the four different communities into a single SGIA, which would focus on developing financing tools for financing transit-oriented development (TOD). Of the applicant entities, one is Wheat Ridge, Colorado; one is in Cobb County, Georgia outside of Atlanta; one is the Utah Transit Authority; and the last is the South Suburban Mayors and Managers Association, representing 41 municipalities and 41 new and existing METRA stations in South Chicago.

Lee Sobel took over the presentation. He described the charge of this SGIA as seeking to develop model financing strategies for infrastructure investments located around TOD; and seeking to create an infrastructure financing tool kit around these strategies that addresses likely sources of funding, funding structures, and new investment mechanisms for infrastructure investment that could be applied nationally. In the context of this SGIA, EPA is charging the EFAB to develop and describe four new models that could be used to finance TOD infrastructure. According to the charge, EFAB could create these models by using existing models already used by capital markets and public funding means as jumping-off points. *Lee Sobel* described the four new models of transit contexts as follows:

1. TOD at a single, existing station
2. TOD at a single, planned station
3. TOD along an existing, multiple-station transit line
4. TOD along a planned, multiple-station transit line

The EFAB is charged with exploring the full range of opportunities that might enable a community to finance the infrastructure needed to make TOD possible. *Lee Sobel* mentioned that if the EFAB wishes to target its new financing models around the specific transit opportunities presented by the four recipients of the SGIA program described by *John Frece*, EPA will introduce EFAB to these communities and provide greater information about them.

One of the EPA SGIA recipients, the Utah Transit Authority, recently received a HUD Sustainable Communities Regional Planning Grant, and *Lee Sobel* said that with this grant in place, the Office of Sustainable Communities was about ready to start working with an already-identified contractor in Utah.

Work Group Report Outs/11 a.m. to 3:15 p.m.

VEIB/PACE

Leanne Tobias, Chair, said that her presentation would center on a finalized draft letter to the Federal Housing Finance Agency (FHFA), which will be signed by the Board once it has approved the text. In its final form, the letter would clarify the Board's concerns about what it feels is a misunderstanding on the part of the FHFA concerning the benefits of Voluntary Environmental Improvement Bonds (VEIBs). This incorrect interpretation of the program has, in the opinion of the work group, led to FHFA actions that have halted the implementation of the VEIB program, and of a similar program, the Property Assessed Clean Energy (PACE) bond program.

The PACE program funds energy retrofits of residential and commercial properties. VEIBs are a specialized form of "property secured obligations" and can be used to finance the installation of improvements such as solar panels, insulation, insulating doors and windows, and energy-efficient tank-less water heaters that will improve air quality and reduce non-point source water pollution. The Board is on record as supporting both programs as viable, effective mechanisms to finance improvements to buildings and other structures that will bring about community-wide environmental improvements. The letter states that FHFA's concerns about the VEIB program stem from the ability of property assessments made in conjunction with the financing of improvements to take priority over all other property-related obligations, such as mortgages.

Leanne Tobias said that the finalized letter does two things. It states that the FHFA should not oppose financing methods for property improvements that serve a community-wide purpose, because these instruments have been around for many, many decades, and their underlying concepts have been recognized in U.S. tax law. The letter also reiterates the Board's belief that additional use of qualified private activity bonds would enable an efficient and cost-effective aggregation of public improvements on private properties at tax-exempt rates.

Following some discussion, the Board voted unanimously to support the letter in its present form. It will be signed by *DFO Shapiro* and *Chairman Abelow* after minor revisions and formatting is completed and forwarded to FHFA.

Financing Clean Air Technology

Sharon Dixon Peay, Chair, first recognized *Ellen Kurlansky* of the Office of Policy in the Agency's Office of Air and Radiation for her contributions to date. Ms. Dixon Peay said her presentation continues discussions from previous meetings regarding the promulgation of a rule related to commercial boilers. This rule went into effect February 21, 2011 although changes were made from the version discussed at the EFAB meeting in August 2010 because of significant public comments during the regulatory comment period.

She said that the key point that emerged from her extensive discussions with *Ellen Kurlansky* was the fact these regulations are being put in place for public health purposes. *Dixon Peay* also said that the work group had found out that DOE may include EPA in discussions on boiler technologies. The basic choice with regard to technologies in the context of the new rule is either retrofitting, or the installation of newer, cleaner technologies. Regardless of which companies choose, the changes required under the new rule are going to be costly. She said that among the topics she discussed with *Ellen Kurlansky* were business considerations, such as the fact that the types of businesses that will be affected by the rule run the full gamut; energy considerations; other benchmarks; and how companies are making strictly financial choices. She said that data-gathering is still going on, and that there are plans to synthesize all of this data. She also mentioned a conference call with the workgroup.

She said that there is some concern about the data. In some of the discussions that had taken place over the past couple of days there was an inability to come down on exactly what those benefits will be. So those considerations will be included. And then the work group also mentioned some of the other benchmarks that it might in fact look to in order to compare with the kinds of things that companies here in the U.S. are doing or that the larger conglomerates are doing. There was also mention of the corporate responsibility standards that perhaps might be put in place by large multi-national conglomerates, which have facilities in the U.S. She said the group also talked about how companies that are not making a strictly financial choice or decision might in fact be looking only to meet their corporate responsibility objectives by making changes in the way that they comply with these rules. When this factor is added to the whole discussion, it changes the nature of what in fact might be an incentive for companies. So, in a nutshell, the work group is in fact at a stage where there is still data-gathering going on. Research assistants should be coming on board shortly, and the group plans to synthesize all the data and the discussions and the ideas that have been gathered. A conference call will be scheduled shortly with the group to move forward. She mentioned that there were some volunteers to look at various considerations that were outlined in the group's discussion and that the group would be using these people to help pull all this together and begin shaping the framework of the group's recommendations.

Leanne Tobias said that one thing that might be considered is looking at purchasing standards that have emerged predominantly in the federal sector, but elsewhere as well, in terms of products that are produced in a green or sustainable or environmentally sound way, because this would be an incentive for companies to comply with some of these regulations. And, that might be a small addition to the incentives that the group and EFAB might want to review.

Eric Draper asked what portion of the overall challenge involving this, relates to sources such as sludge? *Sharon Dixon Peay* replied, that the overall challenge relates to the rules that were put out by EPA. This is the first that the work group actually heard, that they have gone in that direction. She said the group was charged with looking at incentives that will get to the installation of better technologies. But she said she thought it is probably outside of the purview of the working group to drill down very deeply to what those technologies might be. She said the group is basically relying on EPA to say that compliance that just involves retrofit will get you to such-and-such a level, and compliance that gets you a higher level, or to using some of the newer technologies that are cleaner will get you to another level. So the group is supposed to figure out what gets accomplished to make the first decision versus the second decision.

Eric Draper said he was interested in this because of the problem of sewage sludge in Florida which is a major source of pollution for unimpaired waters, and trying to reverse that. The trend his organization has been recommending is to move sewage sludge toward incineration. Therefore, he thought it would be worthwhile for the group to be considering in the framework of what they were already doing; that is, if you did have an energy production stream on something like that---that type of retrofitting could contribute in some way to some of the financing solutions. He said it seemed as if the work group has already talked about this but that he would like to recommend that this at least be moved into part of the consideration of how to finance bringing commercial boilers into compliance.

Keith Hinds suggested that among industries that he looked at, the sugar cane growers in Florida actually produce quite a lot of waste in the form of biomass. He said there are other growers that then use that biomass to fire their boilers. He suggested that this might be something that would be important; i.e., the cost disposal of this waste is a cost avoidance which might be important to look at economically to see what the disposal costs for the waste are versus using that as an alternative fuel to pay for a larger boiler.

Eric Draper followed up by saying that the sugar cane biogas is the largest renewable energy source in the state of Florida right now ----upwards of 120 megawatts base load. They have also brought into that also, lawn waste and horticultural waste products that they burn in the same facility. And there is a desire in the state to advance this concept. *Sharon Dixon Peay* responded that she thought that this was something that *Ellen Kurlansky* had mentioned; that kind of broadening. She said she thought that the thoughts about what can be considered are something that is part of this rule. And it certainly will be explored more as the work group continues to synthesize all the comments they received.

Returning to the biowaste issue, *David Eberle* said that his state, Florida, is headed toward non-compliance and some of us are very excited about that prospect. What we have done for distributed methane production is that we have required our solid waste trucks to all be run on natural gas as well as our urban buses, and that allows the smaller methane producers to set up distribution points and so you realize some efficiencies in terms of the piping, and you are actually using it to reduce the air pollution from the use of these vehicles that are traveling every day. So far, it has worked out fairly well because it is a very nominal amount added on to residential sold waste disposal fees; perhaps $1.50 a month. They did not even notice this in the bond market.

Jennifer Hernandez said that on the energy production side of the equation, given how particularly probable and fragile the manufacturing sector is, in terms of funding the upgrades to these regulated boilers, it might make sense to talk to the key boiler manufacturers to see whether they have any creative ideas, especially about packaging their technology with potential energy production capability or even just a more out-sourced model with energy production that could create revenue. The abilities of smaller concerns that have these boilers might be improved as a result. Probably a targeted conference call or some such with the key manufacturers might illuminate whether this might be a fruitful discussion or not.

Thomas Liu said that this group may need to develop financing incentives to some of the entities that will be subject to the boiler rule. In this context, he mentioned that a lot of the companies that have boilers subject to the new rule have been adversely affected by the economic downturn. Part of our challenge going forward, he said, is to develop financial incentives; financial incentives that really help them, given their current economic position, which is not good for many. Maybe thinking of outside-of-the-box concepts such as accelerated depreciation methodologies and then possibly trading the depreciation credits with other entities. I think whatever solutions we come up with will have to be very innovative.

Andrew Sawyers said he thought that *Thomas Liu's* point was critical. That this project could become fairly unwieldy if the work group and the Board was not careful. He said he had listened to a lot of the things during the conference calls on the boiler rule and that much of what is said has absolutely nothing to do with financing. He said that there are some bigger questions here, and there are a lot of extenuating circumstances that are going to dictate how owners of these boilers comply with this rule. He said that he thought that Board members needed to be mindful of the critical things to focus on. This issue of ability to pay is certainly something the Board will need to continue to focus on. As *Brandon Belford* alluded to in his presentation, these new technologies may not actually reduce costs, but in fact will likely increase costs. And that is a significant issue for a lot of these folks who EPA has been trying to get to comply, so this is becoming very much an advocacy outreach-type exercise for EPA, essentially we have rules. It is a rule with which these companies have to comply and then EFAB will likely have to try and see how to soften that information if you will; that communication to these companies. He said, this is an incredibly huge issue that for most of the Board members has very few implications with regard to financing.

Bradley Abelow said that if there are some truly innovative structures that involve trading attributes around that we as Board members think might be productive. I would encourage the work group to pursue those. But, in light of *Andrew Sawyers'* question---he said he thought if these do not exist---it may be in fact more appropriate to go back to EPA and say look, it is a different problem; not one that we are actually well-equipped to help you with. Of course, if the government wants—in implementing this mandate----to create a financing component by providing funding to do something else, that would be a useful incentive and something we could help them with. But short of that, it is not a financial problem. I think it is legitimate for EFAB to say "We have looked at this question and we cannot actually help."

Sharon Dixon Peay agreed that this might turn out to be the only thing that EFAB could go back to EPA with. She also said that there appears to be a desire to create a synergy between what EPA is attempting to get done with their mandatory boiler rules and the work of DOE and the need for more energy efficiency, which she thought would benefit the overall implementation of these rules. She said she thought that there is a piece in that conversation that the Board might be able to add to as well. Once again, it is focused on financing. *Bradley Abelow* responded, however, that he was concerned about the Board's time, and doing the cost-benefit analysis.

Sharon Dixon Peay said that she had been trying very hard to make sure that the working group is *not* doing that, because there is a large body of data out there already, so there seems to be a narrow place in which the Board can actually make a comment. She thought that if the Board stuck to that, it would be all right.

Michael Shapiro said that this may already be part of the group's work plan, but it seemed to him that at some point the group was just going to have to roll up its sleeves, sit down with a few examples, and see whether there are solutions as part of that exercise, so that you do not end up dealing with the problems of thousands and thousands of individual facilities. He said, if the group could just grapple with a sub-category and make sense, maybe it would find out some things about where the opportunities are, what programs may be available that could be helpful, or what programs would be needed to really flip the decision from the least-cost compliance option----which may be to go out of business-----or to just get by with the minimum, to something that is more innovative, more long-term, and environmentally efficient. He said it may be that someone is going to have to put something on the table to make that happen, and until the work group has actually gone through such an exercise, it is hard to draw conclusions. *Sharon Dixon Peay* said she completely agreed, she thought that the work group was also cognizant that right now there are just few alternatives that really work. There are some things that just don't work at all and there are some things that might make a difference. Tax credits have been mentioned, potentially being able to trade emissions has been mentioned, and other things. She suggested that giving such subjects a good airing in this context was possibly the most useful thing that the work group could do.

William Cobb said he thought there were really two problems. The first is an engineering and compliance issue. It was necessary to get over the fundamental compliance threshold before the financial question even came up. He said that a common corporate decision process was very simple. A company was going to take a look at the least-cost approach for compliance. Once a company understands the least-cost approach, then it would take a look at the incremental economics of the "beyond compliance" alternatives. Then it was going to compare the internal rate of return against corporate thresholds. He said, what we are hearing in the work group is that; if there is a payback to these projects, it is an extended payback period. By definition, an extended payback period results in a very low internal rate of return. So an alternative to invest in a "beyond compliance" solution most likely is not going anywhere. And so, if that decision process is representative for your common company, and a lot of these companies are struggling financially, you are not going to see them investing limited capital in something that is not generating the cash flows they really need to stay in the business. And so you are never even going to get to the second financing question. The financing is not going to move matters forward. That is the dilemma the work group is really wrestling with. A previous point about articulating the corporate governance and decision-making process---we can definitely do that. But he said that he thought there were really two problems and to get to what this group is tasked with--- the financing piece----it presumes that a company could get over the first hurdle and corporate feedback on the compliance decision represents reality. Another thing we talked about regarding the boiler financing rulemaking, of which he was aware of are the additional comments from associations flowing into the Agency on this rule-making regarding job losses. A lot of companies are geographically fixed---hospitals, mining etc. But manufacturing companies have the alternative of leaving the country---and those companies are evaluating the viability of leaving the US right now. And these comments will be going back into the Agency. So it is a really dynamic situation, but the finance piece is really at the tail end of this entire situation.

Tribal Financing

Debi Livesay, Chair, read the charge for financing of tribal environmental initiatives and reiterated the additional bullet points that the work group had suggested to *Chris Hoff* and *Luke Jones* of AIEO at the latter's presentation the previous day. The purpose of these suggested points was to better frame the broad inquiry of the charge itself.

In response to a question from *Mary Fancoeur, Debi Livesay* said that the tribes are given *x* amount of money to use to build environmental capacity, under $200,000 a year. This generally funds one to one and one-half staff persons at any one time. She said the work group needs to figure out how to turn it around so it can make this program pay for itself and not always be on tribal funds. That was part of the study: how can we do that with what we have been given to work with? This morning when we were talking, everybody else was talking about all of the other programs that have some kind of mixture of matching funds or some such. But tribes just do not get that opportunity. So she said that the work group needs to start looking at how the tribes can create funding to make their programs sustainable, without just relying on EPA help. She said she thought the heart of the charge was, what can the group do to get beyond the present situation, in which the tribes continue to rely on EPA funds?

William Cobb returned to the concept of the continuum brought up the previous day. He reminded everyone that the continuum, at one end, was "EPA administers everything." And then on the other end you had tribes completely administering their environmental programs. He re-stated that there are multiple stopping points along the continuum, and, as discussed yesterday, one to two people in an environmental program get you into some low-level threshold monitoring activity; that would be water, or an air-type activity. But having a few people resources is not "capacity" to issue a permit. And so, moving along the continuum, and with the Agency asking the question how can you fund a self-sustaining program, the question is where are the revenues associated with driving that program? So, what the work group is looking at is that there has got to be a correlation between economic activities that generates revenue that matches movement along that continuum. And so, if there is limited opportunity within the tribe from the standpoint of economic activity, one gets to the following point: the tribe does not really have critical mass; it does not have sufficient funds, and so why bother with this? Therefore, you do not move along the economic continuum. On the other hand, if you have got the economic activity that matches up with the regulatory program, what the work group is trying to look at is; what are the environmental impacts of those economic activities? How does that relate to a regulatory program, and do you have the funds to start biting off pieces of those regulatory programs? Absent any other mechanism to get to revenue that is sustaining, it is back to "why bother?" He said that this is really what is at the heart of the issue. So if you are not advanced economically, where does it take you? What is it that really facilitates taking those steps to recognize that not everybody's going to be like the Navajos, who have a mature, advanced tribal environmental program.

Keith Hinds asked whether the work group had any idea what the economic level of activity was among all of the tribes to which EPA gives money. Does the work group have any data on that? How many tribes are above a certain threshold and how many are below? *Debi Livesay* said she thought there was data of this type; that many studies had been done. She was supported in this regard by *Sarah Diefendorf.*

Jennifer Hernandez said that she thought this was a great challenge for EFAB, and suggested that sometimes it is important to give EPA what it needs, not necessarily what it wants. She suggested that working through word choice on the suggested additional bullet items for the charge would not be a good use of the work group's time. She said that EFAB had a really good team assigned to work on this issue and that the gist of the charge has come down to how to make this a sustainable program for tribal communities.

Michael Shapiro mentioned that there is not a state that he was aware of that has turned down federal money to support its environmental programs. He said that the members think of the states as having mature environmental programs and for the most part they do. The states implement most of the federal requirements. But again, he said most of them would say that their effectiveness is certainly affected by the availability of continuing federal grants. So he does not think that tribes can be expected, even in the best of circumstances, be in a different position than the states are in, in the sense of not wanting or needing any federal money. He said he thought the key notion is, how you can think about scenarios in which they can take on and retain more responsibility, recognizing that unlike states, they do not have the economic base, typically, to fund their basic functions.

Mary Francoeur suggested that the discussions were in effect re-configuring the charge, to basically look at how to foster economic development among the tribal communities. *Chiara Trabucchi* said she disagreed with that idea. In her view, what is being discussed is, how can these tribes have self-implementing regulatory programs related to environmental issues? As it currently stands, they receive a portion of funding through federal financing. In her view, what the work group was wrestling with was, how do you identify which environmental programs these tribes need support, in terms of financing? What tools exist to allow them to self-finance their programs? She believes that to arrive at the end note written in the charge, it is necessary to take a step back and think more broadly focusing on the economic activities that result in environmental impacts, and which necessitate a regulatory program. If you have an economic base, and that does not result in an environmental impact, why bother? In her view, the Board's charge is financing, not economic sustainability. But if you have a tribal nation that has a suite of economic activities that result in environmental issues, and you want to create an environment in which this economic base operates in a way such that it is protective of human health and the environment, what sorts of financing tools might that nation consider to either tag to that economic base, or ancillary to the economic base in order to finance their program? She agrees that the Board does not want to go down the road of economic sustainability. To the degree there is a marriage between environmental financing and helping the Agency think through the programmatic development of that financing, she thought that EFAB had something to say.

Michael Shapiro said that he thought *Chiara Trabucchi* had characterized yesterday's discussion very well. He said that there's a dimension that needs to be added because it reflects the reality of a lot of tribes, in the sense that their environmental concerns are not necessarily even partially associated with what is happening on tribal lands. If you are worried about water pollution or what farming or gas extraction upstream is going to do to your waters, and your regulatory responsibility is to establish standards within the tribe that are protective of the upstream uses, when a plant is being permitted upstream, you can intervene in the permitting process just to say, "These water quality standards are not going to be met, so EPA needs to intervene in the permit." That is a different scenario but for many, many tribes, it is an important aspect of their environment. *Chiara Trabucchi* said that she was in agreement.

Mary Francoeur said that she thought that the part of the charge about looking at the legal and regulatory framework around tribal finance is an important role for the Board. She said that from a lender's perspective, the whole issue of enforceability for bond holders of tribal debt has become a major issue in the bond market, and that this is going to have a material impact on a tribe's ability to access the capital markets because of the actions of a handful of tribes over the last couple of years. She specifically mentioned bonds related to casino operations of certain tribes. *Sarah Diefendorf* said that this has been fairly well documented. She said there are also issues of tribal sovereignty and tribes being willing to give up their sovereignty in order to make the deals that they need to make to drive economic development.

Chiara Trabucchi asked *Mary Francoeur* if the bonds issued by these tribes—such as the Navajos---were rated. She also asked *Mary Francoeur* if she had any insights into the rating process for such bonds. *Mary Francoeur* responded that these bonds have been rated in the past, although a lot of tribes have issued some unrated debt. She said the Pequots have issued debt and that was rated debt, and but she said she thought that it was now below investment grade. But it had been investment grade at the time it was issued. She mentioned a recent case in which the Link of the Torches had issued some debt----for a Wisconsin tribe, she believed----a couple of years ago. And there have been issues of enforceability and repudiation of the debt; basically, the tribe now claiming that they did not have the authority to issue the debt when they issued it. She suggested that there was an entire body of information out there on this subject that the work group would probably want to access concerning the regulatory and legal framework. She said that the markets are reasonably familiar at this point about the ins and outs of tribal finance.

Michael Shapiro said that, as he understood matters, EFAB will need to get back with the AIEO to reach closure after having done some editing of the bullet points added to the charge to capture relevant aspects of discussion. He said he thought that the work group should be able to follow up pretty quickly and reach an agreement with them on the wording of the charge. And then the Board can begin work.

Sustainable Communities

After the *Chair, Philip Johnson*, made his presentation on behalf of this relatively new work group, there followed a lengthy and very wide-ranging discussion which made it clear that many of the Board members did not have a truly clear idea of the nature of the charge, in the context of the Board's areas of expertise. Members struggled to articulate what they thought the charge really was, and what constructive contribution EFAB might make. At least two Board members ventured to suggest that the charge, although probably not with EPA's intent, actually presented a completely new area that the Board needed to explore intensively and flesh out, providing guidance to EPA in areas that the Agency itself may not have consciously thought of.

Jennifer Hernandez said over time it had occurred to her that sometimes EPA is just "asking for what they are asking for" and that what they were asking for in this case is what she called a primer on development financing. *Chiara Trabucchi* said that she thought that the sustainable communities charge fell very broadly within the Board's charter, but that, as written, it did not mesh clearly and specifically with the Board's areas of subject and operational expertise. She suggested that the work group return to EPA, to perhaps tailor the charge so that it better meshed with the Board's charter and objectives. And given her interpretation of the potential broadness of the charge, she also said she thought it was relevant to the tribal charge and the clean air charge. Several other members agreed with her in this regard. *Philip Johnson* said that, from his point of view, the way the charge is written does not get to the issues of sustainable communities as well as it could.

Keith Hinds mirrored the confusion of some of the other members when he said that he thought it would be time well spent, either in committee or sitting down with the Office of Policy to refine the charge further and see exactly what resources EPA has in their back pocket to support this effort . He confessed to still being a little confused. What was EPA looking for in the charge? He did not know. He said he had not "identified a concrete or steel or anything that needs to be paid for at this point. What are we talking about?" For her part, *Lauren Heberle* suggested that, in spite of the confusion, the charge could be "a frontier moment" in which EFAB could come in and bring in all the knowledge it has around a table to help the Agency----but also across the Agency----in a new partnership, to talk about how to bring the collective resources together more efficiently and in a better way.

Sarah Pesek suggested that, to be true to the core mission of EFAB, it might be that, in order to do what the Board is being asked to do by EPA, it might be necessary for the Agency to figure out what they actually want. In the context of the new imperative for inter-agency efforts, she thought the Board had a lot to contribute because of its members' experience working with other federal agencies in a variety of ways.

Bradley Abelow attempted to summarize what had been said by everyone by comparing their task, very broadly defined, to a funnel. He said that the narrow end of the funnel is the very practical aspect: working on a tool kit, buying all the different things that are there available. What is the tool kit and the best practices that support it? He suggested that *Ms. Pesek* was perhaps talking about what all of the members may all be able to bring to the table, in terms of their collective experience, and to identify the things that have worked and have not worked as the members try to ask people to work across jurisdictional lines and across agencies. He reminded everyone that this is a central goal of the Administration as well as the Administrator ---to work together more efficiently. So again, perhaps the key issue is to try to shed light on what might be helpful; using his analogy, he said that the purpose of the top of the funnel is to at least point in the direction of a broader set of issues as the Board and the Agency think about development and then perhaps financing across *really* big jurisdictional lines. He cautioned that all of this could not be elucidated in the course of a six-month or one-year project. But he said he thought the Board, in the process, could help point to work in an "inevitable next frontier" that needs to be done. He suggested that this could be a charge that the Board could work on, and that he was thinking of it as a single charge, but obviously not something on which they'd get a response to from the Agency in a week. He speculated that it would be a substantial piece of work that might have phases to it. He also said he did not know if the Board was really well equipped to define the frontier of environmental finance. He said, "That is why I said the wide end of the funnel is pointing toward questions, while the narrow end represents very narrow, concrete issues that can be dealt with in a reasonable time frame."

Michael Shapiro said he was in general agreement with *Mr. Abelow's* summary, and that he thought it might be useful to pull together quickly something in writing that captured these thoughts expressed that could then be shared with EPA's Policy Office, to create the basis for a suggested day-long session or whatever is thought suitable. Is this a reasonable next step?

At *Bradley Abelow's* request, *Philip Johnson* agreed to circulate the ideas expressed among the committee and then try to pull together a document based on these discussions, which he would then start to work on through with the Agency. He would then bring the document back to the Board as a whole, so it could start its own work on these ideas.

Public Comment

DFO Michael Shapiro convened the public comment period. There were no comments.

Meeting Summary and Next Steps

Michael Shapiro thanked everyone for their input and thanked in particular the departing Board's members. EPA's *Vanessa Bowie* confirmed that once the newly-appointed board members get the final go-ahead from the Administrator, they will go through orientation and will select the work groups in which they want to participate well before the August meeting. *Mr. Shapiro* then summarized the results of the meeting as follows:

1. With regard to the EPA's Air Office and boiler MACT, the Board is going to be in implementation mode.
2. *James Gebhardt* will follow up with the Office of Water staff to see if we can take the feedback from this meeting and agree on a work plan element that could be framed into an ongoing charge for EFAB work in the infrastructure financing area, which hopefully could then be brought in draft form back to the August meeting.
3. PACE and VEIB – Complete the letter and sign it.
4. Tribal areas – Some further refinement of the suggested charge revision needs to be done, which will get back to AIEO and then hopefully over the next week or so the Board will be able to finalize that charge and begin implementation.
5. Sustainable development – The Board agreed on framing the proposal and getting back to the Office of Policy with a suggested tiered approach that *Mr. Abelow* summarized and which will then form the basis for perhaps an intensive work

session with Agency staff to come up with a revised charter, hopefully within the next several weeks. Hopefully, this can be circulated to all members of the EFAB work group and something will be ready for the entire Board to work on before the August meeting.

Bradley Abelow reminded everyone that the August meeting will be the one where all the issues to be worked on in the next year will be discussed. He told all the attendees that if they have thoughts about items to be added to the August meeting agenda, they should be sent to him and the *DFO Michael Shapiro*.

Adjournment

DFO Shapiro thanked all of the participants and adjourned the meeting.