Emerging Themes in Environmental Finance
Insights from a Forum of Leaders
Public Forum Participants

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The costs of environmental services, programs, and infrastructure continue to rise in cities, counties, and states across the country. At the same time, the individuals, communities, and governments tasked with paying for environmental protection are experiencing financial challenges that make finding increased funding to support these services increasingly challenging.

Whether it’s a billion dollar effort to restore a region’s polluted water supply, a $2,000 project to weatherize a financially disadvantaged family’s home, or a program to replace a small town’s 50-year-old water treatment plant, environmental initiatives share a common challenge: who pays and with what money? Without implementing fair and sustainable solutions to these environmental finance questions, the most brilliantly conceived environmental technology or program will likely fall short of achieving its goals.

On May 5th, 2014, the UNC School of Government’s Environmental Finance Center hosted a public forum featuring presentations by prominent environmental finance experts and innovators from a variety of perspectives that cut across geographic regions, sectors, and issues. This event fostered discussion and identified emerging trends, strategies, and ideas in answering the basic “how will we pay” questions at the heart of successful environmental protection.

Emerging Themes in Environmental Finance

- The past is not coming back
- There is urban demand and rural need
- Big challenges are driving innovation
- Distributed solutions are needed, but are difficult to finance and coordinate
- Multiple skill sets will be needed to meet future challenges
- Public-private partnerships are an option, but are not the only answer
- Unlikely partners are driving innovation
- There is opportunity in data
- Consumers need to be on board
- Fairness and equity will continue to be challenges

“Environmental finance is a critically important component in building great communities.”

- Michael Smith, Dean, UNC School of Government
The past is not coming back

“The future is not going to be like the past, and the past is not coming back”
- Stan Meiburg, Acting Deputy Administrator, EPA

The way communities pay for and administer environmental protections is changing. Traditionally, environmental programs were funded through a combination of federal grants and general revenue. Today, most protection programs are funded through local fees. In this transition, the private sector has taken on a much more prominent role in financing and/or administering a range of environmental programs, particularly in environmental enterprise services such as water and wastewater programs.

The regulatory framework has also changed. State and federal governments have shifted away from command-and-control regulations to a more market-based system. This new framework relies less on a top-down hierarchy and more on an interrelated network of agencies, administrators, and private or non-profit organizations. The future of environmental finance will depend on the ability of these networks to operate effectively within this new system of governance.

There is urban demand and rural need

As urbanization continues to channel attention towards the needs of larger cities, rural communities will be forced to grapple with aging infrastructure systems and diminishing financial resources. Many areas of the country are expected to see huge population growth in the coming years, while other areas are slated to lose residents in remarkable numbers. Rural communities founded on manufacturing or farm economies are at particular risk of population decline, with businesses moving overseas or closer to urban areas and decreasing demand for workers. Rural flight is expected to leave behind older, resource poor communities with fewer means to finance infrastructure projects, but with equal or greater need for upkeep and upgrades.

“There is a lot of environmental infrastructure need in rural communities and not enough money.”
- Karen Massey, Director, Missouri Environmental Improvement and Energy Resources Authority
Big challenges are driving innovation

The changing landscape of environmental finance is driving new ways of thinking about and addressing public problems. In the absence of traditional public financing, public private partnerships (PPP) are offering new and unique ways to plan for infrastructure projects, in some cases adjusting the traditional five to ten year Capital Improvement Plans (CIPs) into two to three year plans in order to zero in on immediate needs. Administrators are also beginning to adjust the way they think about infrastructure projects. Traditional gray infrastructure is beginning to merge with green technologies, and green infrastructure is now appearing in CIPs. As environmental issues continue to grow and multiply, communities are beginning to select more integrated, innovative, and dynamic solutions as a means of achieving greater environmental and financial resiliency.

Distributed solutions are needed, but are difficult to finance and coordinate

Green is going grassroots. There is potential for billions of dollars to be channeled from both the private and the public sectors to finance small, distributed projects such as solar installations or green infrastructure on private property. Over the years, private financial institutions have become increasingly familiar with the process of securitizing and standardizing solar contracts and loans, adding a crucial degree of certainty, visibility, and scalability. However, outside of solar, small distributed projects such as rain gardens or green roofs present unique financing challenges that are at odds with traditional private finance principles. Much of the distributed green technologies lack standardization, causing large, cash-infused institutions to generally shy away from extending finance. New institutions such as New York’s Green Bank are working to fill this financing gap by providing up-front credit to jump start emerging green technologies and promoting standardization in underwriting for asset classes and documentation.

Distributed solutions can also run at odds with traditional, large-scale utility projects. Coordinating and integrating small, private projects into the capital plans of electric, water, and wastewater utilities presents a series of challenging governance questions, but also great opportunity and cost savings. Some utilities are fighting it, kicking and screaming, while others are accepting the change and looking for ways to change their business model.

“Larger-pocketed parties still want a business case, but they are out there and willing to invest in solutions to big environmental problems.”

- Alfred Griffin, President, NY Green Bank

Multiple skill sets will be needed

As solutions to environmental problems grow more collaborative and integrative, administrators will need to employ multiple skill sets to ensure a collective approach is indeed effective. Such skills will include a strong grasp on market principles, including how to set rates, plan for capital investments, and anticipate market fluctuations. They will also draw from the social sciences, including how to communicate and work with diverse groups, how to listen, and how to solve problems collectively. The seemingly opposing nature of these demands will require increased dynamisms of administrators and an honest desire to understand issues from multiple perspectives.
Public-private partnerships are an option, but not the only answer

Public investments in infrastructure projects, including incentives, credits, fees, and taxes, are crucial for advancing effective environmental solutions. However, without access to private markets, innovative technologies will remain beyond the financial reach of many private property owners and businesses. Public-private partnerships (PPP) are crucial in spurring the development of both large and small-scale infrastructure projects. Targeted government investments can help attract and drive private investments by providing securitization and certainty. Nonprofits can complement government policies by helping to focus the mission of public initiatives, building consensus within the community, and working in a more nimble manner. Each sector has its own unique concerns over environmental initiatives, but drawing on the strengths of public, private, and non-profit institutions can help overcome the traditional barriers to environmental finance and craft a more navigable path forward.

Unlikely partners are driving innovation

“Unlikely partnerships really do drive innovation. They provide that incentive to get people to go that extra mile in solving society’s greatest challenges.”
- Val Smith, Director of Corporate Sustainability, Citi

Financing will work best when founded on true coalitions. Building a network of public and private alliances will help local institutions address environmental problems in more proactive, cost effective, and creative ways. Environmental programs and services provide incredibly diverse benefits from economic development to public health. Capturing “the market” for these diverse (and somewhat difficult to monetize) benefits requires tapping into interests, energy, and resources of diverse and uncommon organizations. Federal agencies are co-financing projects, local governments are partnering with other communities up and down the watershed, and nonprofits are working in lockstep with investor-owned utilities to outline new rules for operations. Such partnerships are starting to take place across the country and are highlighting the need for sound business plans, diverse revenue streams, long-term financial planning, and creative contracting to cross political boundaries and ownership models.

We need people who are able to do business plans and look out over time to chart a course for their organizations and make sure they have diverse revenue streams.”
- Hawley Truax, Program Officer for Environment, Z. Smith Reynolds Foundation
There is opportunity in data

“States are looking for tools to make hard decisions. Population trends, economic data, and other models are helping to prioritize where the money goes.”

- Karen Massey, Director, Missouri Environmental Improvement and Energy Resources Authority

Community data, including population trends, economic data, and compliance capabilities are pushing wiser, more data-driven spending decisions. These tools are also opening the door for a more robust and dynamic use of funds. For example, New York State used Clean Water State Revolving Loan Funds (CWSRF), which are typically earmarked for wastewater collection and treatment, to guarantee loans for residential energy efficiency retrofits. In order to justify using water funds for emission reduction programs, the state analyzed pollution from power plants, including nitrogen dioxide, carbon dioxide, sulfur dioxide and other gases that contribute to acid rain, and analyzed how reducing emissions could lead to increased water quality. New York found that increased air quality could, in turn, reduce wastewater treatment costs. This dynamic use of data can serve as an example to other states interested in administering funds in innovative and overlapping ways, ultimately helping to stretch limited public dollars to meet a growing environmental need.

Consumers need to be on board

Public support is a crucial precursor to effective public policy and fund raising. Local and state administrators must take the time to educate the public about environmental initiatives, articulate a solid business case underlying the policy goals, and make the connection between investments and quality of service. Significant policy gains can be achieved by engaging the public and fostering a sense of citizen empowerment, ownership, and responsibility. For example, Raleigh, North Carolina successfully added a small watershed protection charge to residents’ monthly water bill in order to clean up the area’s drinking water source. The city received little push back on the initiative and has seen consistent reductions in water use since the outreach campaign took effect. Non-governmental organizations can be effective at mobilizing a community to push the envelope and ask hard questions.

Fairness and equity will continue to be challenges

How to pinpoint and distribute the financial burden of environmental protection is an ongoing challenge in the world of environmental finance. In the past, in some cases large public grants have hidden the cost of infrastructure from current users. While in some sectors great strides have been made to assign costs to environmental impact, other sectors still struggle to align benefactors and beneficiaries. Loan terms that match project lives can help assure that future beneficiaries pay their share. Complex and emerging environmental issues such as climate change still pose a significant challenge in assigning and distributing costs.

“We like to think we pay as we go. But we have not shined a light on to what extent our generation has been takers. That is leaving a real gap for our children and our grandchildren.”

- Lynn Broaddus, Director, Environment Program, The Johnson Foundation at Wingspread
About the Environmental Finance Center

The Environmental Finance Center at the University of North Carolina, Chapel Hill is part of a network of university-based centers that work on environmental issues, including water resources, solid waste management, energy, and land conservation. The EFC at UNC partners with organizations across the United States to assist communities, provide training and policy analysis services, and disseminate tools and research on a variety of environmental finance and policy topics.

The Environmental Finance Center at the University of North Carolina, Chapel Hill is dedicated to enhancing the ability of governments to provide environmental programs and services in fair, effective, and financially sustainable ways.

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